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Report of the Comptroller and Auditor General of India

for the year ended March 2013

भारतीय लेखा एवं लेखा परीक्षा विभाग ✦ INDIAN AUDIT AND ACCOUNTS DEPARTMENT

Union Government (Railways)

No.26 of 2014

(Compliance Audit Report)

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for the year ended March 2013

Laid in Lok Sabha/ Rajya Sabha on _____

Union Government (Railways)

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PREFACE

The audit of Ministry of Railways and its subordinate offices is conducted under Article 149 and 151 of the Constitution of India read with Section 13 of the C&AG 's (Duties, Powers and Condition of Service) Act, 1971 and in accordance with C&AG's Regulations on Audit and Accounts.

The Compliance Audit Report for the year ended 31 March 2013 has been prepared for submission to the President under Article 151 (1) of the Constitution of India.

This Compliance Audit Report contains 20 audit observations including three thematic audits arising out of test audit of financial transactions conducted during the year 2012-13. Matters relating to earlier years which could not be included in the previous Reports and matters relating to the period subsequent to 2012-13 have also been included, wherever considered necessary.

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Abbreviations used in the Report

IR	Indian Railways
CR	Central Railway
ER	Eastern Railway
ECR	East Central Railway
ECoR/E. Coast	East Coast Railway
NR	Northern Railway
NCR	North Central Railway
NER	North Eastern Railway
NFR/NEFR	Northeast Frontier Railway
NWR	North Western Railway
SR	Southern Railway
SCR	South Central Railway
SER	South Eastern Railway
SECR	South East Central Railway
SWR	South Western Railway
WR	Western Railway
WCR	West Central Railway
RPU	Railway Production Units
DLW	Diesel Locomotive Works
CLW	Chittaranjan Locomotive Works
ICF	Integral Coach Factory
RCF	Rail Coach Factory
DMW	Diesel Modernization Works
PAC	Public Accounts Committee
FA&CAO	Financial Advisor and Chief Accounts Officer

Overview

This Report contains the audit findings of significant nature detected during the compliance audit in Ministry of Railways (Railway Board) of the Union Government and its field offices for the year ended 31 March 2013. The Report contains five chapters. Chapter 1 gives a brief introduction of the audited entities; recoveries made by Ministry/ Department at the instance of Audit; remedial actions taken in response to audit observations made in earlier Reports; summarized position of Action Taken Notes. Chapters 2 to 5 present detailed findings/observations under the relevant department title.

Some of the important findings included in this Report are given below:

Performance of weighbridges in Indian Railways

In Indian Railways (IR) bulk commodities such as coal, iron ore etc are transported loose and required to be weighed at the originating station by weighbridges, en-route or at the destination points to plug the leakage of revenue and also to discourage overloading of wagons. Railway Board has emphasized that all loading points should be covered by weighbridges for weighment of all rakes. Audit, however, observed that out of 1176 loading points, 759 do not have their own weighbridges. They were largely (65 *per cent)* dependent on privately owned weighbridges for weighment especially for bulk consignments such as coal, iron-ore etc. There were deficiencies in the proper up-keep and maintenance of the weighbridges. Performance of these weighbridges was not being regularly monitored. This led to risk of revenue loss in carrying freight.

(Paragraph 2.1)

Maha Kumbh Mela, 2013

The Maha Kumbh Mela 2013 was celebrated from 14th January to 10th March 2013 at Allahabad in Uttar Pradesh. North Central Railway assessed that about 34 lakh pilgrims would utilize the train services during the Mela period. To handle the large rush of pilgrims, the three Zonal Railways (North Central, Northern and North Eastern), impacted by the Mela, made special arrangements for the pilgrims such as running of special trains, provision of safety and security of passengers and provision of other basic facilities. Audit observed that Railway Administrations failed to establish proper coordination

with the State authorities for crowd management at Allahabad station including diversion of pilgrim rush from the Allahabad station. This led to build up of huge crowd at Allahabad station. Lack of proper management in movement of special trains was also noticed during the Mela period. To ensure safety and security of passengers, adequate deployment of security staff is essential. However, shortfall of 33 *per cent* in the deployment of security staff was noticed. On the day of Mauni Amawasya, this problem was further accentuated as there was a shortfall of 48 *per cent* noticed at Allahabad station

(Paragraph 2.2)

Loss due to under-utilisation of Parcel Cargo Express Trains

Southern Railway SR Administration failed to ensure the availability of satisfactory operational arrangements for running of Parcel Cargo Express Trains (PCET) with fixed path and time schedules. This adversely impacted the revenue earnings to the tune of ₹314.64 crore on four routes due to non-commencement/ non-operation of PCET. Besides, the Railway had to sustain loss of parcel charges to the tune of ₹15.44 crore on account of under-utilization of rakes operated on one route.

(Paragraph 2.3)

Loss due to incorrect apportionment of revenue between Railways and Pipavav Railway Corporation Ltd.

Incorrect apportionment of freight share by Western Railway Administration based on the basis of booked route instead of actual carried route resulted in payment of extra share of ₹39.88 crore during April 2009 to March 2013 to Pipavav Railway Corporation Ltd., a Public Sector Unit under Ministry of Railways, operating between the line connecting Port of Pipavav to Surendranagar.

(Paragraph 2.4)

Works implemented under Material Modification in Indian Railways

Material Modification (MM) refers to a substantial change in the scope of a sanctioned work or scheme which was not thought of at the initial stage but which is subsequently considered necessary. Independent works/schemes/ projects do not fall in the category of Material Modification as these would require separate sanction of the competent authority. Audit observed that 91 MM works were sanctioned against 38 original projects. None of these could be classified as MMs as these projects were on adjoining/ separate alignments. Audit also observed that 31 MMs were approved after completion of the original project. In fact in four cases the MMs were sanctioned as late as eight to ten years (Northeast Frontier Railway) after completion of the original project. Ministry of Railways flouted the procedures laid down for both formulation and approval of projects. Even preliminary procedures like conducting a Techno Economic Survey were not followed. In fact the standard procedure of taking approval of the Planning Commission before inclusion of a work in the Annual Works Programme was also not followed.

(Paragraph 3.1)

Acceptance of substandard formation works in construction of a new line endangering safety

The commissioning of new line (Kottur- Harihar) constructed at a cost of ₹351.48 crore on South Western Railway without rectifying major deficiencies in formation work resulted in opening of a new line section for regular traffic compromising the safe operation of trains/ safety of travelling passengers.

(Paragraph 3.2)

Loss due to non-preferring of bills for way leave charges

Non-preferment of bills for way leave charges by North Western Railway Administration in respect of land occupied and utilized by Jaipur Development Authority resulted in loss of ₹30.02 crore.

(Paragraph 3.3)

Avoidable payment of low power factor surcharge due to non-provision of essential equipments in Traction Sub-stations

Dynamic Reactive Power Compensation Equipments were not installed by Southern Railway Administration in thirteen Traction Sub-stations although their provision had been made mandatory by the Tamil Nadu Electricity Board in view of change in method for computing Power factor. This resulted in avoidable payment of compensation/ surcharge amounting to ₹9.77 crore during 2010-13. Such avoidable payment would continue till provision of required equipments.

(Paragraph 4.1)

Management of scrap in Indian Railways

The process of scrap disposal includes timely identification and collection of scrap from originating points, formation of lots in economic quantity of a particular item of scrap, their valuation and sale. Audit observed that no time frame was fixed by the Railways for scrap identification and its disposal. The system of assessment, retrieval and disposal of scrap and the monitoring mechanism in place was deficient and delays at various levels enhanced the risk of deterioration of scrap, decrease in value and theft and pilferages. There were substantial delays in write back adjustment to rolling stocks procured from capital account which led to payment of avoidable dividend.

(Paragraph 5.1)

Working of Integral Coach Factory, Chennai

Integral Coach Factory (ICF) at Perambur, Chennai is an important coach production unit of Indian Railways and responsible for design, development and manufacturing of coaches. Audit noticed delay in finalization of Annual Production Programmes due to frequent revisions in the production plans both at ICF and the Railway Board level. The actual outturn of different types of coaches was either increased or decreased in comparison to targets of production fixed for them. This adversely affected the production of heavy build coaches and timely availability of coaching stock.

(Paragraph 5.2)

Working of Rail Wheel Factory, Yelahanka, Bangalore

Rail Wheel Factory (RWF), Yelahanka commissioned in 1984 is a production unit of Indian Railways and is engaged in production of wheels, axles and wheel sets of railroad wagons, coaches and locomotives. Audit observed that the planning process of RWF was weak. Rail Wheel Factory focused primarily on achieving/ exceeding the annual production targets fixed by Railway Board without reference to actual requirement of types of wheels as decided in the quarterly Wheel Tyre Axle (WTA) allotment meeting. Planning for production and distribution was not as per WTA allotment. This lack of synchronization between its WTA allotments and production resulted in stock piling of inventory of certain types of wheels.

(Paragraph 5.3)

Chapter 1: Introduction

1.1 Compliance Audit - Report Outline

Compliance audit refers to scrutiny of transactions relating to expenditure, receipts, assets and liabilities of the audited entities to obtain an assurance that the provisions of the Constitution of India, the applicable laws, the subordinate legislations and other rules and regulations are being duly complied with. This also includes an examination of the adequacy, legality, transparency, etc. of the relevant rules to ascertain whether these ensure effective control over public expenditure and safeguard against misuse, waste and loss.

The matters arising out of compliance audit of the transactions incurred out of the Railway Budget by the Ministry of Railways and its field formations pertaining to the year 2012-13 are highlighted in this Compliance Audit Report.

This Report presents audit findings of significant materiality with regard to the totality of nature, volume and size of public spending in keeping with the generally accepted auditing standards and is intended to aid the Executive in instituting corrective actions/mechanisms to bring about improved governance and better financial management. In particular, the Report explores the performance/implementation of three selected themes covering all the zonal railways. The detailed findings of these audits are presented department-wise in this Report. In addition, detailed audit findings of 17 paragraphs including three long paragraphs are presented department-wise from Chapters 2 to 5 of this Report. These would enable better clarity in terms of accountability of the audited entity, both at the policy-arm at the Board level and the implementing agency at the field level.

Para 1.2 to 1.5 of this chapter outlines the broad profile of the Ministry of Railways and its subordinate field offices, basis of selection of units and issues for audit investigation and the reporting procedure for inclusion of audit observations in the Audit Report. Para 1.6 to 1.10 provide a summary of the year-wise pendency of audit observations vis-à-vis response received from the Railway authorities and present impact of audit in terms of recoveries effected and important remedial actions taken.

1.2 Audited Entity

Indian Railways is a multi-gauge, multi-traction system with a total route length of 665436 kms (as on 31 March 2013). Presently, the Indian Railways, a premier transport organization of the country is one of the world's largest rail network under one management.

Table 1.1

	Broad Gauge (1676 mm)	Meter Gauge (1000 mm)	Narrow Gauge (762/610 mm)	Total
Route Kilometers	57,140	5,999	2,297	64,436
Running Track Kilometers	80,507	6,432	2,297	89,236
Total track kms.	105,701	7,553	2,579	115,833

Electrified route Kms				20,884
Electrified running track kms.				38,236

Indian Railways runs around 12,617 passenger trains and 7,421 Goods trains every day. It carried 23.07 million passengers and 2.77 million tonnes freight each day during 2012-13. As on 31 March 2013, the Indian Railways owned and maintained infrastructural assets and rolling stock as shown in the Table below:

Table 1.2

Locomotives	9,956	Yards	300
Coaching Vehicles	63, 870	Goods Sheds	2300
Freight wagons	2,44,731	Repair Shops	700
Stations	7,146	Work Force	1.31 million

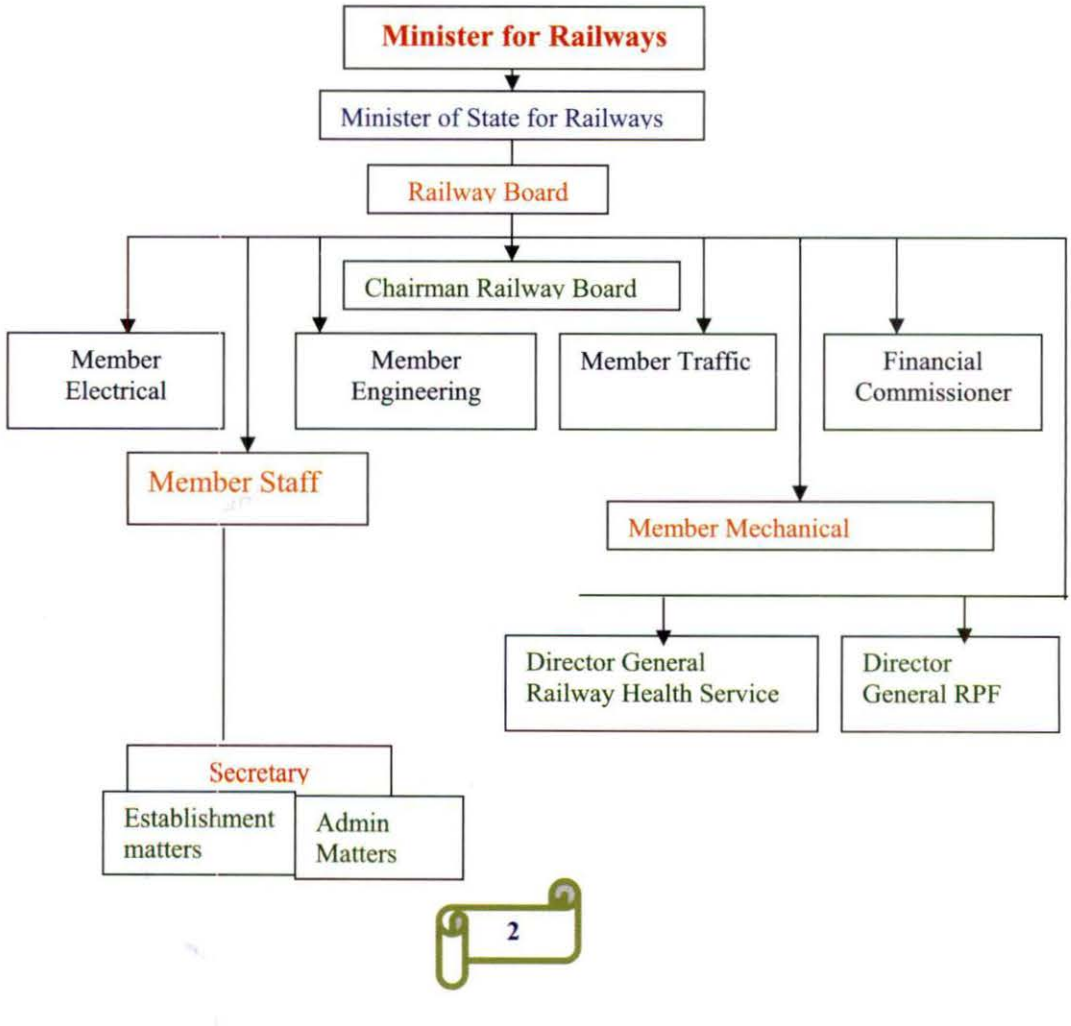
Source – Indian Railways year book 2012-13 and Indian Railways' website

Organization Structure

The Railway Board comprising six Members (Electrical, Mechanical, Traffic, Staff, Engineering and Financial Commissioner) headed by the Chairman reporting to the Minister of Railways. It is responsible for laying down policies on all matters of operations, maintenance, finance and acquisition of assets and monitoring their implementation across zones. The Railway Board is responsible for regulating pricing of both passenger fares and freight tariffs.

The Functional Directorates under each Member assist and aid in decision-making and monitoring of railway operation.

Fig.1.1



At the field level, there are 17 Railway Zones, one research and standards organization namely, Research, Designs and Standards Organization (RDSO) Lucknow; a Central Organization for Modernization of Workshops (COFMOW) for procurement of specialized machinery; two locomotive manufacturing units (DLW and CLW) at Varanasi and Chittaranjan; three coach factories at Kapurthala, Raebareli and Perambur; one wheel and axle plant at Yelahanka; and diesel modernization works at Patiala.

The names of Railway Zones with their headquarters and total route kilometers are given below:

Table 1.3

Railways	Headquarters	Route kms.
Central	Mumbai	4,042
Eastern	Kolkata	2,546
East Central	Hajipur	3,706
East Coast	Bhubaneshwar	2,655
Northern	New Delhi	7,125
North Central	Allahabad	3,151
North Eastern	Gorakhpur	3,806
Northeast Frontier	Maligaon (Guwahati)	3,965
North Western	Jaipur	5,527
Southern	Chennai	5,079
South Central	Secunderabad	5,852
South Eastern	Kolkata	2,711
South East Central	Bilaspur	2,488
South Western	Hubli	3,327
Western	Mumbai	6,439
West Central	Jabalpur	2,992
Metro Railway	Kolkata	25
Total		**65,436**

Each Zone is headed by a General Manager who is assisted by Principal Heads of Departments, such as Operating, Commercial, Engineering, Electrical, Mechanical, Stores, Accounts, Signal & Telecommunication, Personnel, Safety, Medical etc.

Besides the above, there are 27 Public Sector Undertakings (PSUs) and 2 Autonomous Bodies (ABs) functioning under the administrative control of the Ministry of Railways (as on 31 March 2013). The operations of these PSUs cover a wide spectrum i.e. from providing passenger and freight container services to lease financing, tourism and catering.

1.3 Integrated Financial Advice and Control

A fully integrated financial advice and control system exists both at the Railway Board headed by the Financial Commissioner and the Financial Advisers and Chief Accounts Officers at the Zonal level. The Financial Heads

are responsible for rendering advice and scrutinizing all proposals involving expenditure from the pubic exchequer.

1.4 Audit Planning

Broadly, the selection of the units for audit of the Railways was planned on the basis of a risk assessment with regard to the level of budgets planned, resources allocated and deployed, extent of compliance with internal controls, scope of delegation of powers, sensitivity and criticality of function/activity, external environment factors, etc. Previous audit findings, PAC's recommendations, media reports, where relevant, were also considered.

Based on such risk assessment, test audit of 4526 audited entities of the Railways out of a total of 18121 units was carried out during 2012-13.

The audit plan in particular focused on selected themes of significant nature in terms of policy and its implementation inter-alia covering freight traffic, Railways Earnings, infrastructural development, passenger amenity activities, asset management, material management and safety works. Each study is accompanied by recommendations/suggestions on the basis of audit findings, reported under department specific chapters, so that the authorities concerned may act upon them to obtain better results in terms of the policy/scheme objectives.

The findings of the Thematic Audits on 'Performance of Weighbridges in Indian Railways' and 'Works implemented under Material Modification', have been included in this Report. In addition, lapses on part of Railways were also commented upon in the Thematic Audit on 'Mahakumbh Mela 2013'. Besides, 17 paragraphs including three long paragraphs are also included in this Report.

1.5 Reporting

The Thematic Audits were conducted across the Zonal Railways using sampling methodology and accessing relevant records and documents of the field units including those of the Railway Board. The audit findings were issued to the respective Zonal Managements for their response. Similarly, Audit Notes/Inspection Reports (IRs)/Special letters arising out of regular audit of vouchers and tenders were issued to the Associated Finance and Head of the unit for obtaining their replies. Audit findings were either settled or further action for compliance was advised depending upon action taken. Important audit observations, not having been complied with, were followed up through Draft Paragraphs addressed to the General Managers of Zonal Railway with copies endorsed to the FA&CAOs and Heads of the Departments for reply within the prescribed period. Selected issues raised in these Draft Paragraphs were taken up as Provisional Paragraphs with the Ministry of Railway (Railway Board) for furnishing their reply within a period of six weeks (as prescribed by the Public Accounts Committee) before their inclusion in the Audit Report.

1.6 Response of the Ministry/Department to Provisional Paragraphs

A total of 94 Draft Paragraphs including Thematic Audits were issued to the General Managers of the concerned Zonal Railway up to October 2013. After considering the replies of Railway Administrations wherever received, 20 Provisional Paragraphs (including three Thematic Audits) proposed for inclusion in Compliance Audit Report, were forwarded to the Chairman Railway Board, Members concerned and the Financial Commissioner, Railway Board between **21st February 2014 and 23rd June 2014**. Ministry of Railways had replied to one Provisional Paragraph till July 2014.

1.7 Audit objections issued, settled and outstanding

During the year 2012-13, based on the results of test audit, a total of 4608 Audit objections involving financial irregularities of ₹20462.06 crore were issued through Special letters, Part-I Audit Notes and Inspection Reports. Besides these, there was a carry forward of 7233 audit objections pertaining to the previous years. A total of 3781 Audit objections were settled during the year as Railway Administrations recovered/ agreed to recover the amounts involved or had initiated corrective/ remedial action. The balance 8060 audit objections outstanding as on 31 March 2013 involved financial irregularities amounting to ₹28548.38 crore.

1.8 Recoveries at the instance of Audit

Audit has pointed out the cases of under charges in realization of freight and other earnings, over payments to staff and other agencies, non-recovery of dues of the Railways etc. amounting to ₹323.59 crore in the various Zonal Railways during the year 2012-13. An amount of ₹248.62 crore was accepted for recovery (₹98.14 crore was recovered and ₹150.48 crore was agreed to be recovered). Six Zonal Railways accounted for recoveries exceeding ₹10 crore each - East Coast (₹84.38 crore), East Central (₹64.16 crore), Northern (₹28.01 Crore), North Central (₹11.70 crore), Northeast Frontier (₹11.37 crore) and South Central (₹11.16 crore). Out of the total amount of ₹248.62 crore recovery accepted, an amount of ₹56.64 crore pertained to transactions that were already checked by Accounts department of concerned Railways and ₹151.32 crore were other than those checked by Accounts department. As a result of further review carried out by Accounts department another ₹40.65 crore were recovered/agreed to be recovered.

1.9 Remedial Actions

In addition, Railway Board initiated remedial action in response to audit observations by appropriate changes in freight tariffs and issue of instructions during 2012-13 for better and improved compliance. Some of the important cases are illustrated in Table 1.4 below:

Table 1.4

Para No. of the Report	Audit observations	Action Taken by Ministry
Para 6.2.2 of Report No. CA 19 of 2008-09	Failure of the CR Administration to maintain and keep the records of land in safe custody has led to non-relinquishment of land worth ₹18.18 crore for the last nine years	Railway Board has issued (May 2012) necessary instructions to CR Administration and directed that if the State Government is unwilling to acquire the land, action be taken to dispose of the same by offering to the third party as stipulated in Para 1038 of Engineering Code.
Para 6.1.1. of Report No. CA 19 of 2008-09	As per the standard format of siding agreement for defence siding, maintenance charges should be revalued after every five years. Ignorance of this rule by CR Administration resulted in short recovery of maintenance charges.	Chief Engineer/ CR has issued instructions (May 2012) to the concerned department to review the agreements of Private and Defence sidings and ensure the compliance of the procedure for recovery of outstanding dues. Further realization of the short recovery is being followed up with the Defence Authorities.
Para 6.4.2 of Report No. CA 19 of 2008-09	SCR – Improper planning on part of Railway for unloading of rails and avoidable transportation of the rails by road resulted in extra expenditure of ₹4.25 crore	As a remedial measure, Railway Board instructed (February 2013) SCR Administration to ensure proper planning and adequate action to prevent such occurrences in future.
Para 3.1.8 of Report No. CA 6 of 2008	SCR - Idle expenditure on construction of staff quarters without assessing the demand.47 Staff quarters constructed by SCR at a cost of ₹3.17 crore remained unoccupied	As a remedial measure, Railway Board instructed SCR for fixing the responsibility for the bad planning and post staff at the stations where surplus quarters exist. Railway Board also instructed (May 2012) all Zonal Railways to undertake a critical review of existing quarters. Assessment of requirement of quarters should be done in consultation with the DRMs before construction of new quarters in any project even if the provision exists for quarters in the estimate.
Para 3.13 of CA-08 of 2004 (DP-01/2002-03)	Failure of CR Railway Administration to adhere to codal provision for "Deposit Works" resulting in non-recovery of expenditure incurred in excess of deposit made by the parties.	Railway Board issued instructions (May 2012) to all Zonal Railways to review all such cases and to ensure that the necessary action is taken as prescribed in the Para Nos. 1134 and 1849 of Engineering Code. Board also issued strict instructions to all concerned Railways that non-observance of codal

		provisions would be viewed seriously and responsibility shall be fixed. In the instant case, 75 per cent of the amount pointed out by Audit has been recovered by CR Administration.
DP No.03/ 2012/ ECR	As per rules, where placement and/ or withdrawal of wagons are done by multiple engines, the siding charges should be calculated taking into account the multiple engines. In contrary, wrong fixation of siding charges using single engine led to loss of ₹14.59 crore to the Railway.	The ECR Administration accepted the audit contention and instructed (July 2012) Operating Department to notify the number of locos used for placement and/or withdrawal of wagons in specific siding. After such notification, siding charges would be rectified at this end and division would be advised accordingly to calculate and levy correct siding charges. The concerned division were also advised to realize under charges after rectification of siding charges earlier fixed.
Special letter/SECR dated 24.03.2011	SECR - Wrong fixation of siding charges from serving station instead of Depot station as the placement of rakes were done from the depot station. This led to the loss of ₹ 30.24 lakhs to SECR on account of short recovery of siding charges.	SECR Administration accepted (May 2013) the audit contention and ensured to carry out fresh "Time & Motion study" for implementation of correct siding charges.
Special letter/SECR dated 28.09.2010	SECR - Irregular grant of train Load Benefit to Food Corporation of India (FCI) led to loss of ₹0.83 crore.	SECR Administration accepted the audit contention and stated (December 2010) that the debt has been raised against FCI for realization of the short recovery.
Part I inspection Report /SECR dated 21.03.2012	SECR - Inward parcels booked to the Kotma station from different locations were over carried to Chirmiri station.	SECR Administration issued (March 2013) instructions to the concerned department to take extra care and arrange to unload the parcels and avoid over carrying of parcels in future failing which the matter will be viewed seriously.

1.10 Paragraphs on which Action Taken Note received/pending

To ensure the accountability of the Executive on all issues dealt with in the Report of the Comptroller and Auditor General of India, the PAC had decided (1982) that the concerned Ministries/ Departments of the Government of India should furnish corrective/ remedial Action Taken Note (ATNs) on all Paragraphs contained therein and had further desired in their Ninth Report (Eleventh Lok Sabha) presented to Parliament on 22 April 1997 that henceforth corrective/ remedial ATNs, duly vetted by Audit, on all Paragraphs included in the Reports be furnished within four months after the Report was laid on the Table of the Parliament.

The position of ATNs furnished by the Railway Board (July 2014) on the Paragraphs included in the Reports of the Comptroller and Auditor General of

India – Union Government (Railways) up to the year ended 31 March 2012 is given below:

Table 1.5

Year	Total para included in the Reports	No. of para on which ATN Finalized	No. of Paragraphs on which ATNs are pending				
			Not received	ATN on which comments sent to Railway Board	ATNs finally vetted	ATN under verification by Audit	Total
1997-98	96	95	0	0	0	1	1
1998-99	106	105	0	0	0	1	1
2000-01	101	99	0	1	0	1	1
2001-02	101	97	0	3	0	1	4
2002-03	110	109	0	0	0	1	1
2003-04	114	111	0	2	0	1	3
2004-05	105	101	0	2	0	2	4
2005-06	138	129	0	7	0	2	9
2006-07	165	160	0	4	0	1	5
2007-08	172	166	0	4	0	2	6
2008-09	104	96	0	4	1	3	8
2009-10	59	45	0	9	1	4	14
2010-11	34	13	0	12	0	9	21
2011-12	28	1	11	7	2	7	16
Total	**1433**	**1327**	**11**	**55**	**4**	**36**	**95**

ATNs in respect of 11 Paragraphs relating to the Report for the year 2011-12 were not received within the prescribed period of four months. 55 ATNs received for vetting by audit were returned with observations for lack of adequate remedial action. Four ATNs, vetted by audit, are yet to be finalized by Ministry of Railways. In 36 cases, the action stated to have been taken is under verification by Audit.

Chapter 2: Traffic - Commercial and Operations

The Traffic Department comprises four streams viz., Traffic, Commercial, coaching and Catering & Tourism. The activities related to these streams are performed by the concerned directorates headed by Additional Members/ Executive Director. At the Railway Board level, the Traffic Department is headed by Member Traffic.

The activities such as marketing, traffic development, improvements in quality of railway service provided to customers, regulation of passenger/ coaching/ freight tariffs, monitoring of collection, accountal and remittance of revenues from passenger/ freight traffic are managed by Commercial Directorate. The activities such as planning of transportation services – both long-term and short-term, management of day to day running of trains including their time tabling, ensuring availability and proper maintenance of rolling stock to meet the expected demand and conditions for safe running of trains is, however, managed by Traffic Directorate.

The management of passenger and parcel services is done by Coaching Directorate and activities related catering and tourism are managed by Catering & tourism Directorate.

At the zonal level, the traffic department consists of two department, viz., Operating department and Commercial departments. These are headed by Chief Operations Manager (COM) and Chief Commercial Manager (CCM) respectively, who are under charge of General Manager of the concerned Zonal Railway. At the divisional level, the Operating and Commercial Departments are headed by Senior Divisional Operations Manager (Sr. DOM) and Senior Divisional Commercial Manager (Sr. DCM) respectively who are under charge of Divisional Railway Manager of the concerned Division.

The total expenditure of the Traffic Department during the year 2012-13 was ₹6363.75 crore. Total Gross traffic receipt during the year was ₹ 1,23,732 crore[1]. During the year, apart from regular audit of vouchers and tenders etc., 1183 offices of the department including 559 stations were inspected.

This chapter includes following two Thematic Audits:

(i) **Performance of Weighbridges in Indian Railways** – In this thematic audit, Audit noticed that Railway Board failed to ensure weighment of all freight traffic. Audit observed that out of 1176 loading points in Indian Railways, 759 did not have their own weighbridges. They were largely (65 *per cent)* dependent on privately owned weighbridges for weighment especially for bulk consignments such as coal, iron-ore etc. The performance of weighbridges was not being checked regularly by the Railway Administrations. This has increased risk of revenue loss in carrying freight of bulk consignments. Audit also noticed deficiencies in their proper up-keep and maintenance.

[1] Indian Railway year book 2012-13

(ii) **Maha Kumbh Mela 2013** – Audit commented on the arrangements made by Railways (North Central, Northern and North Eastern) for the Maha Kumbh Mela, celebrated at Allahabad during 14th January to 10 March 2013. Audit revealed that Railways failed to establish proper coordination with the State authorities to regulate the influx of pilgrims towards Allahabad station. The stampede at Allahabad station on 10th February 2013 highlights the lack of necessary coordination and cooperation with the State Government.

In addition, this chapter incorporates five Audit Paragraphs highlighting individual irregularities pertaining to underutilization of traffic assets that led to revenue loss to Railways and loss on account of incorrect application of rules.

2.1 Performance of Weighbridges in Indian Railways

Executive Summary

Indian Railways (IR) is the single largest mode of transport for long haul freight movement. Goods are transported either in bags or loose. The bagged consignments are loaded in uniform standard bags and are exempt from mandatory weighment. Generally bulk commodities such as coal, iron ore etc are transported loose. These are required to be weighed at the originating station by weighbridges, en-route or at the destination points. This is essential to plug the leakage of revenue but also to discourage overloading of wagons/rakes to avoid damage to rolling stock and track/path.

Railway Board has emphasized that all loading points should be covered by weighbridges so that there is 100 *per cent* weighment of all rakes. Out of 1176 loading points as on March 2013, 759 (64.54 *per cent*) were not provided with weighbridges. Railway Administrations failed to identify even associated/ alternate[2] weighbridges for 562 loading points. Four Zonal Railways failed to notify any associated weighbridges for their 261 loading points. Despite less number of weighbridges only 76 weighbridges were sanctioned during the period 2008-13, of these 31 weighbridges were yet to be installed. It was also seen that IR is largely dependent on private weighbridges (65 *per cent*).

The Railway Manuals prescribe a large number of checks to be performed by Railway Officials to ensure that the weighbridges are maintained properly and perform accurately. These checks were generally not being followed by the Railway Administration especially for private weighbridges. Performance of these checks were not being monitored. These checks assume importance in view of the Railways' dependence on private weighbridges and the fact that a significant proportion of bulk commodities are weighed at private weighbridges.

Railway Board had advised that all weighbridges installed be utilised for weighment of parcel vans and a Joint Procedure Order (JPO) embodying guidelines be issued by each zone. However, no JPO was issued by any Zonal Railway. At seven loading points over five Zonal Railways, only 18 *per cent* of parcel vans were weighed. Out of the parcel vans weighed, over weight was detected in 4.37 *per cent* of parcel vans and penalty of ₹2.60 crore was collected. This indicates violation of Railway Boards instructions for weighment of parcels on a substantial scale.

2.1.1 Introduction

Indian Railways (IR) having a vast network of 64,600 route kilometers are the principal mode of transportation for long haul freight movement in the country. IR carried around 1008 million tonnes of freight during the year 2012-13 and earned ₹ 85,262 crore. This comprised 67 *per cent* of the total revenues earned by the Railways.

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[2] Associated Weighbridges (WB): WB identified for loading points without a WB. Alternate WB: Alternate WB identified for loading points with WB.

Goods are transported either in bags or loose. Commodities transported in loose such as coal, iron ore etc. are to be weighed at the originating stations by wagon weighbridges wherever these exist. Where the weighbridges do not exist at the originating stations, the wagons are to be weighed en-route or at destination points before effecting delivery to the consignees[3]. The bagged consignments are loaded in uniform standard bags and were exempted from mandatory weighment. To avoid under weighment, Ministry of Railways decided (September 2011) that at least five *per cent* of rakes should be subjected to weighment. This is necessary not only to plug the leakage of revenue due to overloading of wagons/rakes, but also to discourage overloading of wagons/rakes to avoid damage to rolling stock as well as the track/path.

IR has two categories of weighbridges (WB) – static and In-motion. While weighment in static WB is done separately for each wagon in a static condition, the in-motion WB, as the name suggests, can weigh the entire fleet of wagons in a rake while it is in motion thereby avoiding detention of wagons. Introduction of Electronic In-Motion Weighbridges (EIMWB) on IR dates back to the 1990s. The development of the EIMWB was carried out by the Railway Board in consultation with Research Design and Standards Organization (RDSO).

2.1.2 Organizational set up

Railway Board is responsible for policy decisions in connection with weighbridges. The General Manager of the Zonal Railway is responsible for justification and deciding location for weighbridges. He is assisted by the Traffic Commercial Department headed by Chief Operations Manager and Chief Commercial Manager who are responsible for operations, manning and record keeping of the weighbridges. The Mechanical Department headed by Chief Mechanical Engineer of the Zonal Railway is responsible for technical specification, technical support for installation and maintenance of the weighbridges and the Stores Department headed by Controller of Stores of the Zonal Railway is responsible for procurement action.

2.1.3 Earlier Audit Report

Audit Para No. 5.3 on "Working of Weighbridges over Indian Railways" was included in the Audit Report No. 9 of 1998. The Report highlighted that a clear perspective plan of installation of weighbridges had not been drawn up. It further pointed out that non-weighment of wagons caused loss of revenue assessed on account of overloading of wagons. Only 27.28 *per cent* wagons passing through weighbridges were actually weighed and the Railways had no immediate plan to order any more weighbridges.

In their Action Taken Note (February 2008), the Ministry of Railways (Railway Board) stated that based on a report submitted by a Committee of Additional Members, the Railway Board had approved the need for ensuring better availability of weighbridges with greater reliability. They also reiterated that new electronic weighbridges would be installed near the bulk loading points to get optimum benefit.

[3] Railway Board's DO No. 2004/TT/-IV/65/134 dated 29-10-2004

In the present audit, we examined the status relating to subsequent provision and maintenance of weighbridges in IR.

2.1.4 Audit Objectives

The main audit objectives were to assess whether:

- Provision, performance and reliability of weighbridges is adequate;
- Maintenance of weighbridges is carried out as per prescribed schedule;
- Impact of non-weighment of freight.

2.1.5 Audit Criteria, Scope and Methodology

The criteria for assessing the performance were instructions contained in the Indian Railway Commercial Manual Volume II[4], the orders/instructions issued by the Railway Board from time to time and the Standards of Weights and Measures Act, 1976.

Audit covers a five year period from 2008-09 to 2012-13 for examining the weighment of loose commodities such as coal, iron ore etc. dispatched through rail. We also assessed the weighment procedure for container traffic, scrap material sold by IR and parcel vans leased to the private parties. Out of total 516 weighbridges (Table 2.1) in Indian Railways, 144 weighbridges listed in Appendix **I** were selected for scrutiny.

Audit also examined and analyzed the data at the Zonal Head Quarters, Divisional Head Quarters and at selected field locations.

2.1.6 Audit findings

2.1.6.1 Performance and reliability of weighbridges

2.1.6.1.1 Provision of Weighbridges at Loading Points

Railway Board vide their Rate Circular No. 86/2006 of October 2006 emphasized that all loading points[5] should be covered by the weighbridges so that there is 100 *per cent* weighment of all rakes. According to these orders, the Zonal Railways were to notify associated weighbridges for each loading point without weighbridge. Further, alternate weighbridges were also required to be notified for loading points with weighbridge and for associated weighbridges in cases of breakdown of such weighbridges. One weighbridge can act as an associated weighbridge for a number of loading points without weighbridge and also as an alternative weighbridge for loading points with weighbridges.

During Audit, it was observed that out of 1176 loading points, only 417 loading points had their own weighbridges. In 614 loadings points, associated and alternative weighbridges were notified and in remaining 562 loading points notifications were yet to be issued (March 2013). Further analysis of data from table 2.1 revealed the following:

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[4] Paras 1426, 31,35,36&37

[5] Railway/line siding owned by railway or private party (other than goods shed) where loading of goods including containers takes place with prior sanction of the Divisional Commercial Manager of Railway for dispatch of the same to destinations by rail.

Table 2.1
Details of loading points and their associated and alternative weighbridges

Name of Zonal Railway	No. of weighbridges in Indian Railways			Total no. of loading points			No. of Loading points with weighbridges			No. of WB notified by Rly. Admn. for Associated/ alternative WB			No. of loading points where Associated and alternative weighbridges not notified		
	Pvt.	Rly	Total	Pvt.	Rly	Total	Pvt.	Rly	Total	Pvt.	Rly	Total	Pvt.	Rly	Total
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
SECR	71	9	8	72	25	97	64	2	66	72	25	97	-	-	-
NWR	3	7	10	14	88	102	3	7	10	7	19	26	7	69	76
ECR	43	9	52	51	65	116	34	0	34	17	5	22	34	60	94
NFR	2	7	9	2	23	25	2	3	5	0	0	0	2	23	25
NER	0	2	2	3	58	61	0	0	0	0	0	0	3	58	61
WCR	8	12	20	49	60	109	8	12	20	49	60	109	-	-	-
SER	37	19	56	47	34	81	38	22	60	47	34	81	-	-	-
WR	17	24	41	51	98	149	17	24	41	18	38	56	33	60	93
SWR	9	8	17	9	15	24	4	1	5	9	15	24	-	-	-
SCR	32	22	54	55	20	75	30	20	50	55	20	75	-	-	-
NCR	0	6	6	5	37	42	0	0	0	0	5	5	5	32	37
SR	8	12	20	8	7	15	**6**	**5**	**11**	**8**	**6**	**14**	**0**	**1**	**1**
CR	42	5	47	42	5	47	42	5	47	0	0	0	42	5	47
NR	16	11	27	14	114	128	1	0	1	0	0	0	14	114	128
EcoR	22	9	31	20	18	38	20	3	23	20	18	38	-	-	-
ER	23	21	44	27	40	67	23	21	44	27	40	67	-	-	-
Total	**333**	**183**	**516**	**469**	**707**	**1176**	**292**	**125**	**417**	**329**	**285**	**614**	**140**	**422**	**562**

(Source: Records of Commercial department of Zonal Headquarters of concerned Railway)

- Seven Zonal Railways[6] have notified associated /alternate weighbridges for all of their 491 loading points with weighbridges and without weighbridges.
- Four Zonal Railways[7]have not notified any associated weighbridges for their 261 loading points.
- Four Zonal Railways have notified associated/alternate weighbridges for 101 loading points[8]and 207 loading points[9]were still to be notified.

In ECR it was noticed that they have notified associated weighbridges for their 22 loading points without weighbridges. However, notification for alternative weighbridges was not issued against 94 loading points with weighbridges.

Thus, even after a lapse of seven years from the date of issue of Railway Board's orders in October 2006 as mentioned in 2nd sub para above, IR has been unable to cover all loading points by weighbridges and did not notify associated and alternative weighbridges for 562 loading points (nearly 50 *per cent*).

[6] SECR -97, WCR-109,SER-81,SWR-24,SCR-75, ECoR-38, ER-67
[7] NFR-25, NER-61, NR-128,CR-47
[8] NWR-26, WR-56, NCR-5, SR-14.
[9] NWR-76, WR-93, NCR-37, SR-1.

2.1.6.1.2 Profile of Weighbridges

Efficient functioning of any plant and machinery depends upon proper upkeep, maintenance and timely replacement. The normal life of Mechanical Weighbridges has been fixed as 15 years and that of Electronic In-motion Weighbridges was fixed as 8 years by the Railway Board. A test check of records by Audit revealed the following:

- As on 1 April 2008 there were 393 weighbridges[10] in IR. During the period 2008-13, 123 Electronic In-motion Weighbridges[11] were added. Out of 123 weighbridges added, five weighbridges[12] were on replacement account. Thus, as on 31 March 2013 there were 516 weighbridges (Private-333, Railways-183) in Indian Railways for weighment of bulk consignment. Bulk consignment like coal, iron ore etc. are generally sent loose by private parties. In fact bulk consignments form 63.41[13] *per cent* of freight carried by IR (2012-13). Thus, IR is largely dependent on privately owned weighbridges (64.5 *per cent*).

- In-motion weighbridge is preferred to static weighbridge as it entails weighment of rakes in motion thereby reducing detention of the rolling stock. This in turn, increases the availability of rolling stock for more loading, which is beneficial to both the Railways as well as the customers. The Railway Board issued instructions (November 2009[14]) to replace the static weighbridges with Electronic In-motion Weighbridges (EIMWB) by March 2011. In cases of specific constraints where static weighbridge cannot be replaced, the Zonal Railway was to approach Railway Board and obtain specific exemption for their continuance. Audit observed that IR is still continuing with 76 static weighbridges (Private- 70[15] and Railways- 6[16]) after getting specific approval of the Railway Board.

- The over-aged weighbridges are required to be replaced timely to ensure correct weighment. Scrutiny by Audit revealed that out of 516 weighbridges in IR, 164 weighbridges (31.78 *per cent*) are over-aged. In private sidings 133 weighbridges (48 static and 85 In-motion) out of 333 i.e. 40 *per cent* are over-aged. Thus private sidings had a larger proportion of over-aged weighbridges.

- The Status of over-aged weighbridges in the respective Zonal Railways was: SECR (43 Nos), ECR (40 Nos), SER (17 Nos), CR (16 Nos), NR (10 Nos) and ER (10 Nos). Out of 164 over-aged weighbridges, 57 weighbridges[17] (Private – 55, Railways- 2) were over-aged by more than 10 years, 48 weighbridges[18] (Private- 43, Railways- 5) were over-aged by more than 5 years. Audit

[10] Private-268, Railways-125
[11] Private-65, Railways-58
[12] Private-3, Railways-2
[13] Coal, Iron Ore, Limestone & Dolomite, Stones (including gypsum) other than Marble
[14] Railway Board's No. TC-1/2005/108/3-pt. dated 11-11-2009
[15] SECR – 15, ECR-12, NFR-1, SER-12, CR-19, NR-7,ECoR – 1, ER-3.
[16] NR-4, ER-2.
[17] SECR 19 pvt, ECR 19 pvt, SER 1pvt, WR 1pvt, SCR 1 pvt, CR 12pvt NR 2 pvt, ER 2 Rly
[18] SECR Pvt 13; Rly 1, ECR 5 pvt, NFR 1 Rly, SER 12 pvt, WR 4 pvt, NCR 1 Rly, CR 2 pvt, NR 2 pvt; 1 Rly, ECoR 1 pvt, ER 4 pvt; 1 Rly.

observed that out of 105 over-aged weighbridges of more than 5 years, 98 weighbridges belong to private siding owners. Thus, it follows from the above that Indian Railways did not take any tangible action to ensure that private siding owners replace their over-aged weighbridges

2.1.6.1.3 Procurement and Installation of Weighbridges

Railway Board emphasized (October 2004) that all loading points should be covered by weighbridges to ensure 100 *per cent* weighment of all rakes[19] carrying bulk commodities. No time frame for this was prescribed. Further, Railway Board advised Zonal Railways in September 2011[20] to work out a plan within one month for installation of weighbridges covering all loading points within a time frame of one year.

Review of records during the period from 2008-13 revealed that though 759 loading points were without their own weighbridges (Railways 582[21], private 177[22]) as on March 2013, only 84[23] weighbridges were proposed for procurement by the Zonal Railways. Out of these, 76 weighbridges were sanctioned by the General Managers[24] (68 nos.[25])/Railway Board (8 nos.[26]) and 45[27] weighbridges were commissioned till March 2013. The remaining 31 weighbridges were yet to be installed as these were pending at various stages of procurement i.e. tendering (21 nos.[28]) and awaiting supply/commissioning (10 nos.[29]). As on 31st March 2013, delay in tendering ranged between 2 to 40 months. There were inordinate delays of 40 months in SER and SR, 33 months in NCR and 30 months in SWR, in tendering process. Delay in supply and commissioning ranged between 19 to 54 months. Exceptional delays were noticed in SR (54 months), ECR and SER (51 months) and NCR (43 months). Scrutiny of records by Audit revealed the following:

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[19] Board's letter No. 2004/TT- IV/65/134 dated 29/10/2004
[20] RC 32 of 2011 (No. TC-1/2010/108/4 dated 16/9/2011)
[21] SECR-23, NWR-81,ECR-65, NFR-20,NER-58,WCR-48,SER-12,WR-74, SWR-14,NCR-37,SR-2,NR-114,ECoR-15 & ER-19.
[22] SECR-8, NWR-11,ECR-17,NER-3,WCR-41,SER-9,WR-34, SWR-5, SCR-25, NCR-5,SR-2,NR-13 & ER-4.
[23] SECR-13, ECR-2, NFR-2, WCR-2, SER-11, WR-7, SWR-5, SCR-19, NCR-2, SR-9, CR-2, NR-3,ECoR-4 & ER-3.
[24] In October 2004, General Manager was delegated with power of procurement of weighbridges up Rs. 15 lakh
[25] SECR-8,ECR-1,WCR-2,SER-11,WR-7, SWR-2, SCR-14, NCR-2,SR-9,CR-2,NR-3,ECoR-4 & ER-3.
[26] SECR-4,NFR-2, SCR-2
[27] SECR-2,NFR-2,WCR-1,SER-8,WR-6,SWR-1,SCR-13,SR-7,CR-2,NR-2,ECoR-1
[28] SECR-10,SER-2.WR-1,SWR-1,SCR-2,NCR-1,SR-1 & ER-3.
[29] ECR-1,WCR-1,SER-1,SCR-1,NCR-1,SR-1,NR-1,ECoR-3

Table 2.2

Details of weighbridges proposed, sanctioned and installed during 2008-13

Name of Zonal Railway	No of Loading points without own weighbridges			No. Of WB proposed			No. Of WB sanctioned			No. Of WB installed		
	Private	Railway	Total	Private	Railway	Total	Private	Railway	Total	Private	Railway	Total
SECR	8	23	31	NA	13	13	NA	12	12	NA	2	2
NWR	11	81	92	NA	0	0	NA	0	0	NA	0	0
ECR	17	65	82	NA	2	2	NA	1	1	NA	0	0
NFR	0	20	20	NA	2	2	NA	2	2	NA	2	2
NER	3	58	61	NA	0	0	NA	0	0	NA	0	0
WCR	41	48	89	NA	2	2	NA	2	2	NA	1	1
SER	9	12	21	NA	11	11	NA	11	11	NA	8	8
WR	34	74	108	NA	7	7	NA	7	7	NA	6	6
SWR	5	14	19	NA	5	5	NA	2	2	NA	1	1
SCR	25	0	25	NA	19	19	NA	16	16	NA	13	13
NCR	5	37	42	NA	2	2	NA	2	2	NA	0	0
SR	2	2	4	NA	9	9	NA	9	9	NA	7	7
CR	0	0	0	NA	2	2	NA	2	2	NA	2	2
NR	13	114	127	NA	3	3	NA	3	3	NA	2	2
ECoR	0	15	15	NA	4	4	NA	4	4	NA	1	1
ER	4	19	23	NA	3	3	NA	3	3	NA	0	0
Total	**177**	**582**	**759**	**0**	**84**	**84**	**0**	**76**	**76**	**0**	**45**	**45**

(Source: Records of Commercial, Mechanical and Stores Department of concerned Zonal Railways)

- NWR and NER did not propose any weighbridge for installation during the period under review though they have 92 and 61 loading points without weighbridges respectively.
- ECR, NCR and ER sanctioned only six weighbridges[30]for procurement during the period under review against their 147 loading points without weighbridges (ECR-82, NCR-42 and ER-23). The six weighbridges are yet to be installed (March 2013).
- NR, WR and WCR could install only nine weighbridges[31] against sanction of 12 weighbridges[32] though they have 324 loading points without weighbridges[33].
- SECR having 31 loading points without weighbridges sanctioned 12 weighbridges during 2008-13 against which it could install only two[34] weighbridges. It was observed in Audit that 10 weighbridges could not be installed till March 2013 owing to non finalization of tenders. Delay in finalization in these weighbridges ranged between 2 and 14 months.

[30] ECR-1, NCR-2, and ER-3.
[31] NR-2,WR-6,WCR-1
[32] NR-3,WR-7,WCR-2
[33] NR-127, WR -108, WCR-89.
[34] December 2009 and January 2010 respectively

- On the other hand, NFR installed two weighbridges against 20 loading points without weighbridges and CR also installed two weighbridges though they have no loading point left without weighbridge.

Though Railway Board issued Action Plan in October 2004 to ensure 100 percent weighment of wagons and reiterated the same in September 2011, it is pertinent to note that there was hardly any progress made by the Zonal Railways in installation of weighbridges. Further, no record of follow up action by the Railway Board is available.

2.1.6.1.4 Supervision of Weighment by the Railway Staff in Private Weighbridge

As per Railway Board's Instruction of April 2010 read with Rate Circular No. 12/2007 of February 2007, at Private Sidings where Railway staff are posted exclusively as weighbridge clerk for supervising the weighment at private weighbridges, cost of staff is to be borne by the customer. In case it is not possible for existing railway staff posted at such siding to witness the weighment and the customer desires that Railway Receipt (RR) should be issued on actual weight basis then the customer will be required to pay for additional railway staff who will be deputed specially for witnessing the weighment. In case the weighment in private weighbridge is not supervised by Railway staff the weight of such weighbridge will not be accepted and the RR will be issued as per extant rules i.e. based on sender's weight accepted (SWA) or on the basis of Permissible Carrying Capacity (PCC) whichever is higher. In such cases, weighment should also be made in the next available weighbridge and the difference of freight, if any, should be collected.

Scrutiny of records of 89 loading points with private weighbridges out of total 293 loading points with weighbridges disclosed the following:

- Railway staff was not posted for supervision of weighment at 28 loading points involving eight Zonal Railways[35]. It was noticed in SR that all the 8260 rakes from their four loading points[36] were sent on Sender's Weight Accepted during the period under review. In SECR, NFR, SER, WR, NR, ECoR and ER in three months test check (April, October and December), a total of 7856[37] rakes were sent on "sender's weight accepted" as weighment was not supervised by the Railway staff. Audit observed that these rakes were not re-weighed on other weighbridges in contravention to the Railway Board's order of February 2007. Therefore, chances of transportation of overweight rakes cannot be ruled out.
- Railway staff was posted exclusively for supervision of weighment in 24 private loading points[38] (out of 61) where cost of staff was recoverable. Review of records revealed that an amount of ₹6.22 crore[39] was recoverable

[35] SECR-4, NFR-1, SER-3, WR-1, SR-5, NR-7, ECoR-6,ER-1.
[36] ST-CMS Siding Vadalur – 4320, Karaikal Port Siding/Nagore – 2199, Udupi Power Corporation Siding/ Panamburu-890, Chettinadu International Coal Terminal Siding/ Attipattu - 851
[37] SECR-2053,NFR-8, SER-5255, NR-33-ECoR-366 & ER-141
[38] SECR-10, ECR-9, NFR-1 and ER-4
[39] SECR-2.23,ECR-1.63,NFR-0.15,ER-2.21

as on March 2013 from the siding owners in SECR, ECR, NFR and ER during the period under review.

2.1.6.1.5 Performance of Weighbridges - Loss of Machine days.

The weighbridges are available for utilization during 24 hours on all the 365 days of the year. The performance of weighbridges depends on utilization of available machine days. As major breakdowns adversely affect the weighment, they should be kept at bare minimum level by doing proper maintenance. Timely replacement of over-aged weighbridges is also essential. Review of records of 144 weighbridges by Audit (Pvt.-93, Rlys-51), revealed the following:

- Record for data on utilization of machine days was not maintained in respect of 35[40] private weighbridges. As a result, reliability of these weighbridges could not be verified in audit.
- In 56 weighbridges of all zonal Railways, except CR where breakdowns were negligible, there were losses of machine days ranging between 10 to 1230 days due to break down or major maintenance.
- In SECR, a Railway weighbridge at Champa which had exceeded its codal life in June 2008 was under break down for 107 days during 2009-10 and as a result 16 rakes were sent to their respective destinations without weighment
- Detailed scrutiny in ECR, NFR and NR revealed that 3 over-aged weighbridges[41] were under major breakdowns for 409, 372 and 303 days respectively during 2008-13. Audit observed that the machines were over-aged by 121, 61 and 58 months respectively and thus, the breakdowns were mainly due to their over-ageing.
- In ER, 1230 days of break down (67.36 percent) was noticed against 1826 available machine days at the Salanpur weighbridge (private) during the period from 2008-13.The age of the weighbridge could not be ascertained in Audit due to non availability of records. In NR, Railway weighbridge at Vyasnagar was under breakdown for 809 days (44.30) against available machine days of 1826.

During scrutiny of records it was observed in Audit that loss of machine days of weighbridges was mainly attributable to their over-aging by 5 to 10 years. This increases the risk of loss of potential revenue and possible damage to the track and rolling stock. Therefore, Zonal Railways and Railway Board should take appropriate action for replacement of over-aged Weighbridges.

2.1.6.2 Maintenance of weighbridges

2.1.6.2.1 Up-keep and Maintenance - Daily Testing by the Station Masters

Para 1435 of Indian Railway Commercial Manual Volume I stipulates that the Station Master should test daily the weighbridge and weighing machines on coming to duty and make a note of the test in the weighbridge register and tally book respectively. If as a result of the test, it transpired that the weighbridge or

[40] SECR-9, SCR-7, NR-6, ECoR-5 & SWR-8
[41] ECR-NSD(Pvt), NFR-JPZ(Rly), NR-Chanehti(Rly).

weighing machine is out of order, its repair should be arranged for immediately. Scrutiny of 144 selected weighbridges (93 private, 51 Railways) revealed the following:

- Only nine Railway weighbridges[42] and one private weighbridge were being tested as per codal provisions.
- In NR and NCR daily testing was carried out by the on duty Chief Goods Supervisor instead of the Station Master.
- No daily tests were undertaken at all by the Station Masters in 10 Zonal Railways[43] involving 96 weighbridges (35 Railways and 61 private). Tests were exercised only by Station Masters of NER in their two Railway weighbridges selected in audit.
- Partial tests were conducted in the remaining four Zonal Railways (SECR, NFR, NER and CR) where only six weighbridges[44] were covered out of total 31 weighbridges.

Thus, Station Master's daily test of weighbridges was almost negligible. It is evident from the above that Railway Administration did not give importance for testing of weighbridges despite provision in the Commercial Manual. Had the daily testing being done by Station Masters regularly in all weighbridges as per codal provision, break down of weighbridges could have been noticed immediately and timely action initiated for rectification.

2.1.6.2.2 Bi-monthly Joint Inspection by the Railway Officers

Railway Board's instructions[45] provide for bi-monthly inspection of weighbridges by the Zonal Railways. A team of Sr. Scale/JA Grade Officers drawn from Operating, Mechanical, Civil and Finance Department should carry out joint inspections at least once in two months to ensure that all weighbridges are functioning properly and proper procedures are being followed and implemented. The responsibility for proper functioning of the weighbridges and ensuring observance of procedures should be at the level of Additional Divisional Railway Manager (ADRM). Review of 144 selected weighbridges (93 private, 51 Railways) in Indian Railways revealed the following:

Table 2.3
Details of bi-monthly inspection of weighbridges by the Zonal Railways.

Railway	No. of Weighbridges selected			Partial check (not as per prescribed schedule)			Weighbridges not checked		
	Private	Railway	Total	Private	Railway	Total	Private	Railway	Total
SECR	14	2	16	2	2	4	12	0	12
NWR	3	2	5	3	1	4	0	1	1
ECR	9	2	11	0	0	0	9	2	11
NFR	2	2	4	1	1	2	1	1	2

[42] NFR-1 and NER,NCR,CR, NR – 2 each
[43] NWR-5, ECR-11, WCR-8, SER-11, WR-9, SWR-11, SCR-12, SR-8, ECoR-8, ER-13.
[44] SECR-1 pvt, NFR-1 Rly, NER and CR, – 2 Rly by each.
[45] Para 5.0 of Railway Board's letter 4/11/2004 (TCI/2004/109/4 dated 4/11/2004)

NER	0	2	2	0	0	0	0	2	2
WCR	5	3	8	4	2	6	1	1	2
SER	7	4	11	0	0	0	7	4	11
WR	4	5	9	0	2	2	4	3	7
SWR	9	2	11	0	0	0	9	2	11
SCR	7	5	12	0	0	0	7	5	12
NCR	0	6	6	0	0	0	0	6	6
SR	5	3	8	0	2	2	5	1	6
CR	9	2	11	0	2	2	9	0	9
NR	7	2	9	0	0	0	7	2	9
ECoR	7	1	8	0	1	1	7	0	7
ER	5	8	13	0	3	3	5	5	10
Total	**93**	**51**	**144**	**10**	**16**	**26**	**83**	**35**	**118**

(Source: Records of Mechanical Department of Divisions and selected weighbridge locations of concerned Railways)

From the above table the following observations are made:-

- Bi-monthly inspections by the team of Sr. Scale / JA Grade Officers were not conducted at all in seven Zonal Railways involving 62 weighbridges[46] (23 Railways, 39 private).
- Partial checks (not as per prescribed schedule) were conducted in the remaining 9 Zonal Railways on 26 weighbridges[47] (10 private, 16 Railways) out of total 82 weighbridges (54 private and 28 Railways). Further, 56 weighbridges[48] (44 private, 12 Railways) were not checked at all.
- Audit further observed that seven[49] Zonal Railways out of 9 Zonal Railways (where partial check was conducted), exercised the bi-monthly inspections one to three times in a year instead of six times as prescribed. In SECR such checks were exercised once in five years at three weighbridges (Dadhapara-Rly, Goberwahi-Pvt, Hind Energy,Gatora-Pvt) and thrice in five years on one weighbridge (Champa – Railway). SR made such checks once in five years at its two weighbridges (Cochin, Milavittan – both railways).
- Reasons for not conducting such checks as well as deficiencies in checks at private and railway weighbridges were not available on record either at the site or at zonal head quarters. This indicates ineffective monitoring of weighbridges.

From the above it is seen that the Railways to a large extent neglected the testing of weighbridges, both Railway and Private. This increased the risk of under assessment of weight and likely loss of revenue. Further, Audit did not notice any system or procedure put in place for monitoring of bi-monthly joint inspection by Railway officers/GM/Railway Board.

[46] ECR-11, NER-2,SER-11, SWR-11, SCR-12, NCR-6, NR-9.
[47] SECR-4, NWR-4, NFR-2, WCR-6, ,WR-2, SR-2, CR-2, ECoR-1, ER-3.
[48] SECR-12, NWR-1, NFR-2, WCR-2, WR-7, SR-6, CR-9, ECoR-7, ER-10.
[49] NWR, NFR, WCR, WR, CR, ECoR, ER

2.1.6.2.3 Half Yearly Test by the Inspector of Mechanical Department

Para 1431 of Indian Railway Commercial Manual Volume I stipulates that all weighbridges will be tested half yearly by an Inspector of Mechanical Department. After testing he should furnish a certificate for each weighbridge showing that it has been adjusted and tested. This certificate must be displayed in the weighbridge house, until the next inspection and issue of fresh certificate. The data of each testing should also be painted on the weighbridge.

Scrutiny of 144 selected weighbridges (Private 93, Railways- 51) revealed the following:

- Tests were conducted by the NER and NCR on their two and six Railway weighbridges respectively.
- However audit observed that half yearly test was not conducted at all in three Zonal Railways[50] by the Inspector of Mechanical Department involving 28 weighbridges (9 Railways, 19 private).
- Partial testing was conducted on the remaining 11 Zonal Railways. 52 weighbridges [51](32 Railways, 20 private) were tested and, 56 weighbridges[52] were not tested of which 54 were private weighbridges. The details are given below:

Table 2.4

Details of half yearly tests of weighbridges conducted by Mechanical Department

	No test conducted		Test conducted	
	Railways	Private	Railways	Private
SECR	0	13	2	1
ECR	0	1	2	8
NFR	1	2	1	0
WCR	1	5	2	0
SER	0	4	4	3
WR	0	1	5	3
SR	0	4	3	1
CR	0	9	2	0
NR	0	7	2	0
ECoR	0	7	1	0
ER	0	1	8	4
Total	2	54	32	20
Grand total	***56***		***52***	

(Source: Records of selected weighbridge locations of concerned Railways)

Thus, it is evident from the above that out of 93 private weighbridges, half yearly test by the railway officials (Mechanical Department) were not carried out on 73 weighbridges i.e. 78 *per cent* of the weighbridges. This points to a serious lacuna

[50] NWR-5 wb, SWR-11 wb, SCR-12 wb.
[51] SECR-3, ECR-10, NFR-1, WCR-2, SER-7,WR-8, SR-4, CR-2, NR-2, ECoR-1, ER-12.
[52] SECR-13, ECR-1, NFR-3, WCR-6, SER-4,WR-1, SR-4, CR-9, NR-7, ECoR-7, ER-1.

in the maintenance of weighbridges. Further, in SECR, Mechanical Department of Bilaspur and Raipur Division stated that they have no information on such test conducted on private weighbridges.

2.1.6.2.4 Up-keep and Maintenance - Annual Stamping

Railway Board's instructions regarding ensuring availability of at least one test wagon[53] for each site of installation of weighbridges for periodical as well as annual testing were issued vide Board's letter dated 13 October 2000. To ensure proper functioning of weighbridges under normal conditions the Railway Administration should ensure that calibration/inspections/verification/of weighbridges (Railway owned and private) is done by the Weights and Measures Department of State Government once in a year[54]. Further, whenever any major breakdown is attended to and involves part(s) of weighbridge sealed by the Weights and Measures Department, the weighbridge should invariably be got rectified and re-stamped from the Weights and Measures Department[55]. Here the definition of "stamp" as per Section 2(y) - part I of The standards of weights and measures Act 1976 is as under:

"Stamp" means a mark, which is made on, or in relation to, any weight or measure with a view to: -

(i) Certifying that such weight or measure conforms to the standard specified by or under this Act, or

(ii) Indicating that any mark which was previously made thereon certifying that such weight or measure conforms to the standards specified by or under this act, has been obliterated. (Explanation. -A stamp may be made by impressing, casting, engraving, etching, branding or any other process).

Scrutiny of records of 144 weighbridges (Pvt.-93, Rlys-51) in Indian Railways revealed the following:

- Annual stamping is done by the Inspector of Weights and Measures Department of the concerned State Government in presence of Railway officials. During joint inspection by audit with Railway Administration it was observed that in 63[56](Pvt.- 40 Rly.-23) weighbridges a piece of paper containing signature of the Railway as well as State Government officials was pasted on the machine instead of being embossed by a metal seal. In SWR, during visit by audit team on 23 July 2013 at Bharat Mines and Minerals (BMM) private siding/Vyasanakeri (VYS), it was observed that the paper seal dated 29 December 2012 of the weighbridge after calibration was torn. A photograph in this regard is placed below:

[53] Test Wagon is a train comprising 4/5 wagons for testing weighbridges after any major maintenance and annual stamping by the department of Weights and Measures.
[54] Railway Board's clarification No. 2004/DEV. CELL/IDEI/3 dated 10.9.2012
[55] Railway Board's order No. 92/DEV. CELL/IDEI/2 Vol dated 16.11.2004
[56] SECR-8, NWR-4, NFR-2, NER-2, WCR-8, SER-11, SWR-11, SR-8, NR-2, ER-7.

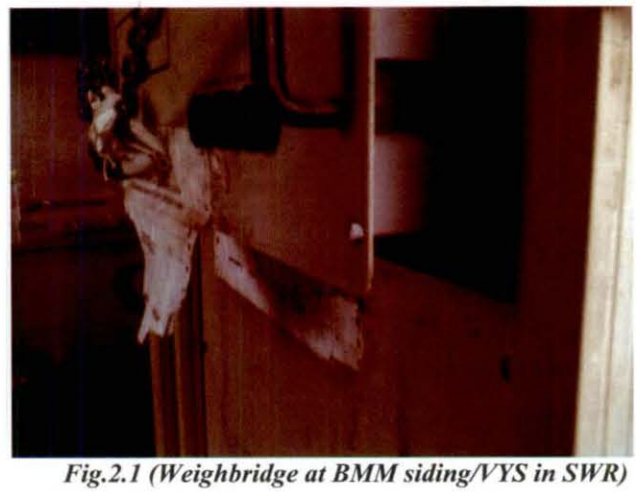


Fig.2.1 (Weighbridge at BMM siding/VYS in SWR)

This practice is prone to tampering and may lead to incorrect weight being certified resulting in overweight in rakes causing loss of revenue and damage to track as well. Some cases are illustrated below:

- There was delay in annual stamping in 85 weighbridges during the period under review. In respect of 14 weighbridges[57] delays were 100 days and above in a particular year during the five year period. In three weighbridges[58] annual stamping was delayed every year for periods ranging between 30 to 252 days. Reasons for delay could not be ascertained in audit as the records were not maintained by the Zonal Railways. Further, in SECR, records for annual stamping in respect of two private weighbridges[59] were not maintained.
- In SR, the annual stamping certificates for Railway weighbridges at Cochin and Irumpanam for the year 2012-13 could not be obtained till date (August 2013)[60] from the Legal Metrology Department of the Government of Kerala as they insisted that the Railway test wagons produced for stamping purpose should have a Legal Metrology certification for stamping the weighbridges.

It is the responsibility of the Railway Administration to get the weighbridges stamped by the Weights and Measures Department annually and in cases of major break down also.

Thus, the weighment in weighbridges without valid stamping certificates from the Weights and Measures Department of concerned State Government have no legal sanctity and may attract provisions of Sections 50 and 51 of the Standards of Weights and Measures Act, 1976. The provisions include punishment with imprisonment for a term which may extend to six months, or with fine or both

2.1.6.2.5 Accuracy Check of Weighbridges by Test Wagons

Before annual stamping by Weights and Measures Department of State Government assuring correctness of the WB, it is to be checked by using the

[57] SECR-3, NFR-1, SER-4, SR-1, CR-1, ER-2, NCR-1 &SWR-1.
[58] Deepika Rejection – SECR, Padmapukur and Durgachak - SER
[59] Bhatgaon and Bhilai Steel Plant.
[60] Subsequently obtained on 15.5.2014 and 19.3.2014 respectively

Railways Test Wagon. The correctness of weighbridges is required to be checked periodically (during annual stamping and major break down) by a train comprising 4/5 wagons which is called a "test wagon". In October 2000, Railway Board instructed[61] Zonal Railways for providing at least one test wagon for each weighbridge for periodic testing. This test wagon would be required particularly for testing weighbridges after any major maintenance and to demonstrate its accuracy at the time of annual stamping by the department of Weights and Measures. As the correctness of the weighbridges is being continuously challenged by the rail users, these orders were reiterated by the Railway Board in November 2004[62].

Test check of records of both private and Railway weighbridges revealed the following:

Table 2.5 - Details of accuracy check of weighbirdges by test wagons of Railways

Name of Zonal Railway	Lapses of periodic check by test wagon during calibration/annual stamping at private weighbridges			Lapses of periodic check by test wagon during calibration/annual stamping at Railway weighbridges.		
	No. of occasion annual stamping/ major maintenance/ calibration done during the period from 2008-09 to 2012-13	No. of occasion **not tested** by test wagon out of col. 2	No. of occasion tested by Test wagon out of col. 2	No. of occasion annual stamping/ major maintenance/ calibration done during the period from 2008-09 to 2012-13	No. of occasion tested by Test wagon out of col. 2	No. of occasion **not tested** by test wagon out of col. 2
1	*2*	*3*	*4*	*5*	*6*	*7*
SECR	Record not maintained*		144	51	51	0
NWR	12	0	12	27	27	0
ECR	144	0	144	31	31	0
NFR	6	4	2	28	0	28
NER	0	0	0	10	10	0
WCR	18	2	16	50	50	0
SER	22	11	11	20	20	0
WR	61	5	56	102	102	0
SWR	67	21	46	141	141	0
SCR	25	0	25	24	3	21
NCR	0	0	0	20	0	20
SR	30	25	5	35	33	2
CR	42	36	6	9	9	0
NR	Record not maintained			47	30	17
ECoR	161	161	0	59	59	0
ER	129	41	88	68	68	0
Total	**717**	**306**	**555**	**722**	**634**	**88**

**** Records in respect of col. 2 & 3 were not maintained by SECR whereas number of occasion tested by Test Wagon was available with SECR.***

(Source: Records of Mechanical departments of Divisions and selected weighbridge locations of concerned Railways)

- Check of private weighbridges by test wagons was not conducted on 306 occasions out of 717 in which annual stamping/major maintenance/calibration

[61] RB's letter No. 99/DEV.CELL/IDEI/1 dated 13/10/2000.

[62] RB's No. 2004/Dev. Cell/IDEI/2 Pt. I dated 5/11/2004.

were done during the period under review. Similarly, in Railway weighbridges, checks by test wagons were not conducted on 88 occasions out of 722 due for such test.

- In ECoR, all the weighbridges (9 Railways and 22 Private) were not tested by test wagons on any occasion during the period under review even though annual stamping by Weights and Measures Department / major maintenance / calibrations were done. Similarly, in NCR and NFR Railway weighbridges[63] were not tested by test wagons on any occasion during the period under review
- In SECR and NR, detailed records were not maintained in respect of regular testing of private weighbridges by test wagons during each major maintenance/ calibration and annual stamping.

Thus, the accuracy of the weighment at these weighbridges was not ensured.

2.1.6.2.6 Short Realization of Test Wagon Charges from Private Siding Owners

The cost of test wagons used for testing private weighbridges should be borne by the private party. In this connection, Railway Board in their orders of May 2008[64] prescribed hire charges of ₹ 1180 per KM per train subject to a minimum of ₹1,18,000 per train or actual KM run effective from 15 May 2008. These charges were revised to ₹1235 with effect from 1 January 2009[65] and again to ₹1708 with effect from 1 February 2012[66]. Review of records by audit revealed that due to non implementation or belated implementation of revised rates towards test wagon charges, there was short realization of ₹5.65 crore from the private weighbridge owners in 14 Zonal Railways[67] as detailed below:

Table 2.6 - Details of short realisation of test wagon charges from private siding owners

Railway	Lapses of periodic check by test wagon during calibration/annual stamping at private weighbridges and short realization of test wagon charges thereof					
	No. of occasion annual stamping/ major maintenance/ calibration done during the period from 2008-09 to 2012-13	No. of occasion **not tested** by test wagon out of col. 2	No. of occasion tested by Test wagon out of col. 2	Short realization of test wagon charges		
				Test wagon charges actually collected (₹)	Test wagon charges should have been collected (₹)	Difference recoverable (₹)
SECR	Records not maintained		144	**22137333**	**26551685**	**4414352**
NWR	12	0	12	1231920	4515140	**3283220**
ECR	144	0	144	27103760	32755265	**5651505**
NFR	6	4	2	0	3057860	**3057860**
NER	0	0	0	0	0	**0**
WCR	18	2	16	4126823	5357270	**1230447**
SER	22	11	11	12279166	12672876	**393710**

[63] NCR – 6, NFR-7 Rly weighbridges
[64] No. TCR/2205/96/1 dated 2/5/2008
[65] No. TCR/2205/96 /1 dated 15/12/2008
[66] No. TCR/2205/96 /1 dated 17/1/2012
[67] SECR, NWR, ECR, NFR, WCR, SER, WR, SWR, SCR, SR, CR, NR, ECoR, ER.

WR	61	5	56	11776052	24988004	13211952
SWR	67	21	46	7244626	10487484	3242858
SCR	25	0	25	6136420	16027804	9891384
NCR	0	0	0	0	0	0
SR	30	25	5	3753995	4696935	942940
CR	42	36	6	2683760	3174492	490732
NR	Record not maintained			7048536	8017655	969119
ECoR	161	161	0	20996900	30352382	9355482
ER	129	41	88	11575300	11926200	350900
Total	**717**	**306**	**555**	**138094591**	**194581052**	**56486461**
₹ in crores				**13.81**	**19.46**	**5.65**

(Source: Records of Divisional Commercial and Mechanical Departments of concerned Railways)

2.1.6.3 Impact of Non-weighment of Freight

2.1.6.3.1 Loss due to Non Replacement of Static Weighbridges

IR is mostly doing bulk transportation of goods in rake formations rather than piecemeal loading of wagons and hence the utility of static weighbridges has been reduced substantially. In November 2009,[68] Railway Board stated that In-motion weighbridge was preferred to static weighbridges as it reduces detention to rolling stock and instructed Zonal Railways that from 01 April 2011, the weighment on such static weighbridge shall not be accepted by the Railways and Railway Receipt (RR) would not be issued on the basis of weighment on static weighbridge. It further stated that in case of specific constraints where static weighbridge cannot be replaced by in-motion weighbridge or weight cannot be done at associated/alternative weighbridges of a particular siding, the concerned Zonal Railway should obtain specific exemption from Railway Board.

Review of records revealed that eight Zonal Railways[69] have only electronic in-motion weighbridges (EIMWB) while remaining eight Zonal Railways[70] continued with 76 static weighbridges (private –70, Railways –6). However, SER stopped using 12 private static weighbridges with effect from July 2011 in terms of above Board's order of November 2009; none of these were replaced by EIMWB. Scrutiny of records of 15 private static weighbridges in these eight Zonal Railways disclosed the following:

- In five Zonal Railways[71] weighment of 3567 rakes in static weighbridges were not accepted by Railway in terms of Railway Board's instructions of November 2009 as mentioned in sub para (1) above and Railway Receipts were issued on "sender's weight accepted" basis. However, the subsequent weighment was made as per rule only for 220 rakes where total penal freight and punitive charges of ₹5.45 crore were collected. Had all the 3567 rakes

[68] Railway Board's letter dated 11-11-2009)
[69] NWR, NER,WCR, WR,SWR,SCR,NCR, SR.
[70] SECR, ECR, NFR, SER, CR, NR, ECoR, ER
[71] SECR-1, ECR-1, SER-2, CR-1, ECoR-1.

weighed on subsequent points Indian Railways could have earned Rs. ₹ 93.65 crore towards penal freight and punitive charges.

- Similarly, in SECR and NR, 7743 rakes were booked on sender's weight accepted (SWA) from two static weighbridge locations[72] and the same were not re-weighed either en- route or at destinations. Therefore, chances of overloading on these rakes could not be ruled out. Loss of revenue could not be estimated as no rakes were checked subsequently.

2.1.6.3.2 Loss of Freight due to Non Weighment

Test check of records for three months (April, October and December) of each year during the period 2008-13 at selected loading points (without weighbridges) revealed that 318 rakes[73] were booked and sent on SWA basis from nine loading points of five Zonal Railways.[74]

It was further observed that in cases of SECR, SER and SWR the above mentioned rakes were booked on SWA despite notification for associated and alternate weighbridges for each loading point. As there was no re-weighment subsequently, loss of revenue could not be calculated in Audit.

2.1.6.3.3 Weighment of Parcel Van

Parcel vans are loaded at Railway station and attached to certain mail/express passenger trains. Bookings etc. in this regard are done by the concerned Zonal Railway. However, some of the Parcel vans of different capacities have been leased to private parties for arranging parcel traffic, loading and unloading thereof by their own staff. Railway Board in July 2009[75] advised Zonal Railways that all weighbridges installed/commissioned under the Indian Railways can be utilized for weighment of parcel van duly executing some software modification in their system. It was further instructed that the Joint Procedure Order (JPO) in this connection needs to be issued from CME, CCM & COM of each zone by 01 August 2009 so as to implement the procedure early.

Review by Audit of 29 parcel loading points out of 142 involving all Zonal Railways except ECR revealed the following:

- No JPO embodying guidelines for weighment of leased parcel vans were issued by any Zonal Railway. Further, Railway Board did not monitor the issue of JPO.
- At 19 parcel loading points over ten Zonal Railways,[76] it was noticed that 76,669 leased parcel vans were passed without weighment during the period under review.
- At eight parcel loading points over five Zonal Railways,[77] a total of 2,08,031 parcel vans were booked during the period under review. Of this only 37,

[72] Bhilai Steel Plant-7683 rakes, Adani siding-60 rakes
[73] SECR-2, NWR-29, SER-56, SWR-5, SR-226
[74] SECR-1, NWR-1, SER-3, SWR-2, SR-2
[75] letter no. 2009/TC/(FM)/11/12 dated 06-07-2009
[76] SECR-1, NWR-1, NFR-2, NER-1, WCR-1, WR-2, NCR-2, SR-3, NR-2, ECoR-4.
[77] SER-1, SWR-1, CR-3, NR-1, ER-2.

366 parcel vans (i.e.18 *per cent*) were weighed in subsequent weighbridges. Overweight was detected in case of 1632 parcel vans where penalty of ₹ 2.60 crore was collected. Remaining 170665 parcel vans were passed without weighment.

- In CR out of 1,48,825 parcel vans booked during 2008-13, 613 were test checked by the Railway authorities on the Mechanical Weighing machine and all 613 were found overloaded and penalty charge was levied and collected. Had remaining 1,48,212 parcel vans (99.59 percent) been weighed, similar cases of overloading could have been detected. Thus, non weighment of 99.59 *per cent* parcel vans booked in CR might have led to substantial loss of potential revenue.
- In WCR, on re-checking the leased parcel van by vigilance teams on two occasions overload was detected and punitive charges of ₹0.02 crore were levied.

It is therefore, recommended that Zonal Railways should take appropriate action for weighment of all parcel vans to avoid leakage of revenue on excess load.

2.1.6.3.4 Weighment of Non-Ferrous Scrap Materials in the Scrap Yard.

Weighment of non ferrous scrap[78] involves high risk of loss to the Indian Railways as the same are costlier than ferrous scrap. Railway Board in February 2007[79]directed that the existing mechanical type of weighbridges at scrap yards/scrap depots be converted into/replaced by electronic weighing scales for weighment of non-ferrous scrap within a period of 12 months. Scrutiny of records of 17 selected scrap yards revealed the following;

- Electronic weighing scales for weighment of non-ferrous scraps were installed in all Zonal Railways except ECR. These were installed within the prescribed period except SECR and WR.
- SECR installed electronic weighing machine in September 2009 i.e. after a lapse of 18 months from the targeted month of February 2008. As a result 106.07 MT of non-ferrous scrap was weighed at mechanical weighing scale and delivered to the auctioneer. In WR there was a delay of 21 months in the installation of electronic weighing machine.
- Despite provision of electronic weighing machines in NFR, NCR and ER, 174.53 MT, 13.25 MT and 38.15 MT of non-ferrous scraps respectively were weighed at mechanical weighing scale and delivered to the auctioneer.
- One static weighbridge of 30 MT capacity at Shakurbasti (NR) was due for replacement in November 2004. For replacement of the bridge, an Electronic static weighbridge (100 MT capacity) was procured in April 2011 at a cost of ₹0.26 crore, but the same was lying un-commissioned (March 2013) due to non availability of power connection, non finalization of drawings of weighbridge room and non availability of funds for ancillary works for weighbridge.

[78] Non-ferrous metals are aluminium, copper, lead zinc, cobalt, chromium and precious metals.
[79] No. 98/RS(G)/779/10/CS dated 13-02-2007

Thus, despite orders of the Railway Board, non-ferrous scrap continued to be weighed by mechanical weighbridges in NFR, NCR and ER.

2.1.6.3.5 Weighment of Container Train

All rakes loaded at each loading point for each stream of traffic are required to be weighed at their respective associated/alternative weighbridges[80]. Railway Board further clarified in December 2009[81] that container trains should also be weighed in weighbridges to detect overloading. It was further emphasized that in cases of container traffic there were not only chances of overloading but also there was scope of mis-declaration of weight to derive benefit of lower weight slab[82].

Verification at 27 container loading points out of 100 (except ECR where no container depot exists) revealed the following:

- At six container loading points over five Zonal Railways,[83] 11,178 container rakes were booked during the period under review out of which 6139 rakes were weighed. Over-weight was detected in 447 container rakes and penalty of ₹ 0.54 crore was collected. However, 5039 rakes were passed without weighment.
- At four container loading points in four Railways[84], 1647 container rakes were booked from these points and weighment made in cent *per cent* rakes. Over load was detected in 192 cases (SECR-35, SWR-46 and SCR-111) and penalty of ₹0.62 crore was collected. No overloading was detected in SR.
- At 17 container loading points, 47602 container rakes were passed without any weighment during the period 2008-13 over 12 Zonal Railways.[85] However, in ER 18 rakes out of 1441 rakes were weighted in subsequent weighbridges and overload was detected in all cases where penalty of ₹ 0.10 crore was collected.

Therefore, overload could have been detected in 47602 and 5039 container rakes mentioned above which were passed without weighment. Had these container rakes been weighed Railway could have collected substantial revenue towards freight and penalty and avoided possible damage to track .

2.1.6.3.6 Instances of Large Scale Overloading of Wagons in SER

In SER it was noticed that 38,138 rakes passed through 38 weighbridges (Railways 19, private 19) during the period from October 2011 to December 2012. However, 7791 rakes (20 *per cent*) were sent without weighment and freight collected on the basis of SWA or PCC whichever is higher. Of these 9455 rakes (31 *per cent*) were found overloaded and warranted load adjustment. SER

[80] RC-86/2006
[81] Board's No. TC-1/2006/108/4-pt dated 10-12-2009
[82] Railway collects haulage charges from the container operator in four slab (i) upto 10 ton (ii) between 10 ton to 20 ton (iii) between 20 ton to 26 ton (iv) above 26 ton.
[83] SER-1, WR-2, SWR-1, SCR-1, ECoR-1
[84] SECR-1, SWR-1, SCR-1, SR-1
[85] NWR-2, NFR-1, NER-1, WCR-1, WR-2, SWR-1, NCR-1, SR-1, CR-2, NR-3, ECoR-1, ER-1.

Administration was not able to ensure cent *per cent* weighment of all rakes despite notification of associated/alternative weighbridges.

It was further noticed that load adjustments were made by the Railway Administration in 9094 rakes and in case of the remaining 361 rakes, the overloaded wagons were either detached or the train allowed to run with restricted speed.

Thus lack of coordination and ineffective monitoring resulted in recurring incidents of overloading of wagons on a large scale. It is also not possible to assess the loss of revenue for rakes which have not been weighed. Overloading in turn has adverse implication for track safety. Moreover, running of trains at restricted speed also adversely affected the wagon turn round ratio.

2.1.6.4 Connectivity of Weighbridges with Freight Operations Information System (FOIS)

Freight trains do not run to a fixed schedule thus making Freight Operations a highly Information Intensive activity. Optimum utilization of resources like wagons, locomotives, crew and paths on the network is only possible when managers make allocation decisions dynamically. Real time information allows good decision making and thus ensures high levels of mobility within the system. This realization has led to the development of FOIS. Railway Board in October 2006[86] instructed development of an interface between the weighbridge and Train Management System (TMS) of FOIS so that the weighment information is directly transmitted from weighbridge to the FOIS. In case of private weighbridges, cost of linking with FOIS was to be borne by the private party (February 2007). In September 2008, the Railway Board advised that all in motion weighbridges may be linked to FOIS.

Review of records revealed that out of 516 weighbridges over the Indian Railways, only 173 Nos. (33.53 *per cent*) of weighbridges were planned for connectivity with FOIS during 2008- 13. However, scrutiny of records revealed that connectivity was actually provided in only 136 weighbridges i.e. 79 *per cent* as on March 2013.

2.1.6.4.1 Speed Restrictions on Overloaded Rakes/Rakes not Weighed

Movement of overloaded trains is likely to damage the track and rolling stock. On the other hand, movement of goods trains with speed restrictions adversely affect the wagon turn round ratio. Normally no rakes should move without weighment. In case a rake is not weighed after loading due to defective weighbridges or any other reason it should be weighed at the next available weighbridge. Till such time it should move to the next available weighbridge location at a restricted speed of 40 kmph or less as decided by the Railway concerned (September 2008)[87]. However, in January 2010[88] it was clarified by the Board that where there was no weighbridge at the loading point, the rake will move with normal speed up to the location of first available weighbridge for weighment. In case rake is not weighed

[86] No. TC-1/2006/108/4 dated 13/10/2006 – RC 86/2006,
[87] No. TC-1/2008/108/3 dated 30/9/2008
[88] No TC-1/2008/108/3 dated 5/1/2010

on the 1st available weighbridge due to defective weighbridge or any other reasons and it is weighed at next available weighbridge, then speed restriction of 40 KMPH or less as decided by railway concerned is to be followed from 1st weighbridge point to next available weighbridge where weighment is done.

However, test check of three months (April, October and December) records for the period 2008-13 at 200 selected loading points with and without weighbridges revealed the following:

- Loading points with weighbridges: In SECR, ECR, NFR and SER 9849 rakes were booked and weighed at loading points themselves. Out of the above, 3890 rakes were overloaded where speed restrictions were required. But speed restrictions were imposed only on 3151 overloaded rakes and remaining 739 over loaded rakes were allowed to run without speed restrictions.
- Loading points without weighbridges: In SECR, NFR, SER, WR, SWR, NCR and SR, 2600 rakes were booked from the loading points out of which 1066 rakes were not weighed at the first available weighbridges and therefore speed restrictions of 40 Kmph or less as decided by Railway were required to be imposed from first available weighbridges up-to the next available weighbridges. But speed restrictions were imposed only on three rakes and remaining 1063 rakes were allowed to run without speed restrictions.

Thus, Indian Railways need to be more vigilant in monitoring speed of wagons which have not been weighed as this has an adverse impact on safety.

2.1.6.4.2 Load Adjustment

Load adjustment is done by the consignor as per advice of Zonal Railway in rakes found overloaded during weighment. In addition, a penalty of ₹5000 as detention charges per overloaded wagon is also to be collected for detention of rake for load adjustment. In this connection, Railway Board in December 2012[89] decided that w.e.f 17 December 2012 wagons that had undergone load adjustment by the consignor either directly or through their designated handling agencies should randomly be re-weighed. The identification of rakes for random re-weight should be done by CCM in consultation with COM of the Zonal Railway. It was further stated in the Board's order that if overloading is detected in the wagons that had undergone load adjustment by the consignor, a punitive charge of ₹one lakh per wagon shall be levied.

In this context, scrutiny of records of 131 loading points during the period from January to March 2013 revealed that load adjustments were made at loading point on detection of overload during weighment in 342 rakes at 15 loading points involving eight Railways[90]. However, subsequent surprise check was made only in one rake at SER where further overload was detected in 17 wagons and penalty of ₹1,61,578 was raised and recovered from the consignee instead of ₹17 lakh as prescribed in the Board's above order of December 2012. In the remaining cases of 341 rakes no surprise check was made.

[89] RC-39 / 2012 dated 26/12/2012 read with gazette notification dated 17/12/2012.
[90] SECR – 2, NFR-1, WCR-3, SER-1, WR-2, SWR-1, SR-3, ER-2.

2.1.7 Conclusion

The Railway Board failed to ensure weightment of all freight traffic. A majority of loading points were not covered by weighbridges. Further, they were largely dependent on privately owned weighbridges (65 *per cent*) for weighment especially for bulk consignments such as coal, iron-ore etc. Static weighbridges (15 *per cent*) are still used for weightment particularly in private sidings. There were deficiencies in the proper up-keep and maintenance of the weighbridges. These deficiencies were especially pronounced in private weighbridges. There is thus a high risk of revenue loss in carrying of bulk consignments. It is imperative to monitor overloading of wagons and installation of weighbridges at suitable locations/bulk loading points.

Despite Railway Board's repeated instructions, the Zonal Railways failed to ensure 100 *per cent* weighment of loose traffic. Further, in view of the high percentage of overloading noticed in the test checked cases of parcel vans it is advisable that their weighment is also made compulsory so as to avoid leakage of revenue.

Appendix-I
Statement showing basis of selection of weighbridges for audit sampling

Srl No	Category	Percentage selected (Railway wise)	Total population in Indian Railways (Nos)	Nos Selected in Audit for review	
				Total Nos	Railway wise nos
1	Railway weighbridge (In-motion)	20% subject to a minimum of two locations in each zone	177	50	SECR - 2, NWR-2,ECR-2,NFR-2, NER-2, WCR-3, SER-4, WR-5, SWR-2, SCR-5, NCR-6, SR-3, CR-2, NR-2, ECoR-1, ER-7.
2	Railway weighbridge (Static)	20% subject to a minimum of two locations in each zone	6	1	ER-1.
3	Private weighbridge (static)	20% subject to a minimum of two locations in each zone	70	16	SECR - 3, ECR-2,NFR-1, SER-3, CR-2, NR-2, ECoR-1, ER-2.
4	Private weighbridge (In-motion)	20% subject to a minimum of five locations in each zone	263	77	SECR - 11, NWR-3,ECR-7,NFR-1, WCR-5, SER-4, WR-4, SWR-9, SCR-7, SR-5, CR-7, NR-5, ECoR-6, ER-3.
5	Loading point without weighbridge (private)	20% subject to a minimum of two locations	177	40	SECR - 2, NWR-2, ECR-2, NER-2, WCR-8, SER-5, WR-7, SWR-2, SCR-2, NCR-2, SR-2, NR-3, ER-1.
6	Loading point without weighbridge (Railway)	20% subject to a minimum of two locations	528	85	SECR - 5, NWR-2, ECR-2, NFR-4, NER-2, WCR-10, SER-2, WR-15, SWR-3, NCR-8, SR-2, NR-23, ECoR-3, ER-4.
7	Parcel loading point	20% subject to a minimum of one loading point in each zone	142	29	SECR - 1, NWR-1, NFR-2, NER-1, WCR-1, SER-1, WR-2, SWR-1, SCR-2, NCR-2, SR-3, CR-3, NR-3, ECoR-4, ER-2.
8	Scrap yard	20% subject to a minimum of one yard in each zone	38	17	SECR - 1, NWR-1 ,ECR-1, NFR-1, NER-1, WCR-1, SER-1, WR-1, SWR-2, SCR-1, NCR-1, SR-1, CR-1, NR-1, ECoR-1, ER-1.
9	Container loading point	20% subject to a minimum of one loading point in each zone	100	27	SECR - 1, NWR-2, NFR-1, NER-1, WCR-1, SER-1, WR-4, SWR-3, SCR-2, NCR-1, SR-2, CR-2, NR-3, ECoR-2, ER-1.
	Total		1555	342	

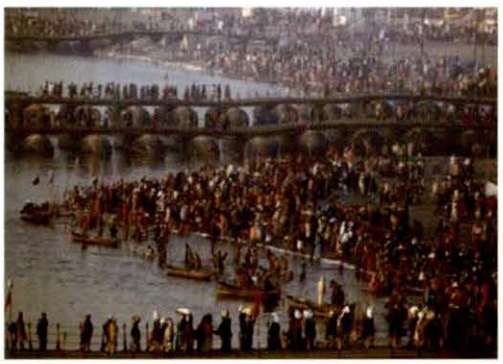
2.2 North Central (NCR), Northern (NR): Maha Kumbh Mela, 2013 and North Eastern Railways (NER)

2.2.1 Introduction

The Kumbh Mela is a major Hindu religious festival that is held every three years at four different locations (Nasik, Ujjain, Haridwar and Allahabad) by rotation. The Kumbh Mela of 2013 was considered a Maha Kumbh Mela, which comes only once every 144 years. The Maha Kumbh Mela 2013 (Mela) was celebrated from 14th January, 2013 to 10th March, 2013 at Allahabad. Around 12 crore pilgrims and visitors from all over India participated in the Mela.

For every Kumbh Mela, the Indian Railways makes special arrangements to handle the additional rush to the Mela site. Arrangements for the Kumbh Mela include making arrangements for running of special trains and providing additional amenities for the pilgrims coming by trains. The State Government of Uttar Pradesh had estimated that around 8.83 crore pilgrims would participate in the Mela. NCR Administration assessed (December 2012) that about 34 lakh pilgrims would utilize services of trains during the Mela period. This was about 14 lakh higher (70 *per cent*) than their normal passenger traffic (20 lakh)[91].

Fig.2.3



Mauni Amavasya falling on 10th February 2013 was considered the most auspicious bathing day (Shahi Snan) of the Mela. State Government expected that about 3.05 crore pilgrims would visit the Mela on this day and Railway projected that about 4.10 lakh passengers would utilize the train services on this day. A major stampede took place on this day at Allahabad Station at Platform no. 6 and on Foot Over Bridge (FOB) No.1 of Allahabad

[91] *(Source: Minutes of meeting held on 13-12-2012 between state/district authorities and railway Mela officer)*

station. The Railway Administration stated (May 2013) that they announced the occurrence of stampede through the Public Address System at about 18:54 hours.

As per the list furnished (February 2013) by the Railway Administration, a total of 38 Passengers were killed in the stampede and 48 were injured and taken to State run hospitals. NCR Administration further stated (March 2014) that as per final count 37 passengers died and 45 were injured.

2.2.2 Audit Objectives

Audit examined the arrangements made by Railways to ascertain whether the plan made by the Railways for handling the pilgrims rush was adequate and whether it was implemented effectively and efficiently.

2.2.3 Audit Scope and Methodology

A review was carried out during March to October 2013 by Audit to examine the performance of the Railways regarding the handling of pilgrims during the Maha Kumbh Mela. Audit examined the related records of Zonal and Divisional Headquarters and Mela locations. Minutes of meetings between Railway Administrations and State Authorities for preparedness of arrangements on part of Railways were also examined.

2.2.4 Coordination and Planning

2.2.4.1 General Planning

In view of the expectation of huge pilgrim rush during the Mela period, the State Government requested (May 2012) the Chairman Railway Board to appoint a nodal officer and a nodal division for coordination with the State and Police Administration to ensure effective and sufficient preparation for the pilgrims. They also requested the Railways to give special attention to the planning of special trains and their notification.

In response, the Railways appointed (June 2012) an SAG level officer of Allahabad division (NCR) as Nodal/Mela Officer. As Allahabad station would be handling the bulk of the pilgrims, NCR zone was designated as the nodal zone for coordination with the state government and other zones. The Mela officer/NCR was also expected to coordinate the activities relating to passenger amenities and running of special trains amongst various Zones/ departments of Railways. Additional Divisional Railway Manager (ADRM) of Lucknow and Varanasi divisions were appointed as Nodal Officer by NR and NER respectively.

An important focus area of the arrangements for the Mela is Crowd Management. This issue takes on huge importance in view of the large crowds of pilgrims expected at stations especially Allahabad station, and that too on important bathing days.

Security of passengers in and around the Railway premises is the joint responsibility of the Railway Protection Force (RPF)/ Railway Protection Special

Force (RPSF)[92] and the Government Railway Police (GRP)[93]. Security of passengers beyond the Railway premises is the responsibility of the State Police, which deals with law and order problems beyond the outer signal of the Railway Stations.

2.2.4.2 Responsibilities of Railways

During the Mela period, Mela office/ NCR expected a huge rush of pilgrims (about 34 lakh), utilizing its services. During the meetings with the officials of State Government, Railways were assigned the duties of running special trains, provision of safety and security of passengers at and around stations, provision of additional basic facilities such as booking counters, display information of incoming and outgoing trains, drinking water, catering stalls, medical posts etc.

The role of the Railway during the Mela largely related to-

- Arrangements for temporary holding and dispersal of pilgrims, their booking, comfort, safety etc.;
- Running of Special Trains for dispersal of rush of pilgrims;
- Facilitation arrangements in Sangam area comprising Booking and Passenger information.

Review of minutes of meetings held, in regard to the preparation of Maha Kumbh Mela, between the Nodal Officer and State authorities revealed that a number of steps were taken to handle the huge influx of pilgrims expected at Allahabad. Detailed plans were drawn up in consultation with Northern Railway and North Eastern Railway – the other zones impacted by the Mela. These issues are discussed below:

- Since the Mela was being held at Allahabad, the bulk of the pressure of movement of pilgrims would be borne by Allahabad station. To reduce the crowds at Allahabad station, the Mela Officer declared eight (including Allahabad junction) additional adjoining stations as Mela stations. These stations were-

Table 2.7

Name of Zonal Railway	Name of station
North Central Railway	Allahabad Junction
	Naini Junction
Northern Railway	Prayag
	Prayag Ghat
	Phaphamau
North Eastern Railway	Allahabad City
	Jhunsi
	Daraganj

(Source: Action Plan of NCR Administration for Maha Kumbh Mela 2013 communicated to State Government)

- Special Trains were planned to run from all the designated Mela stations for

[92] The RPF/ RPSF are under the control of Railway Administration and primarily deal with protection of Railway property and the security of passengers

[93] The GRP is under the administrative control of the State Government and deals exclusively with maintenance of law and order on station premises/ passenger areas and trains

dispersal of rush of pilgrims including Allahabad station;

- Provision was planned for additional passenger amenities such as drinking water, sanitation etc. at all Mela stations, temporary arrangement for booking of tickets and passenger information system in the Sangam area, temporary enclosures were planned near the stations to hold the pilgrim rush heading towards the stations
- Control towers were planned to be established at Allahabad and Naini stations for centralized monitoring, control and coordination for security arrangements, crowd management and train movement;
- To ensure the safety and security of passengers, additional security personnel were planned to be deployed at and around the nominated stations for controlling the pilgrims rush. Installation of CCTVs at stations was also planned to help in controlling the movement of pilgrims towards the stations.
- Provision of medical posts with doctors, para medical staff, ambulances etc. was also planned at the nominated stations;

2.2.5 Experience of earlier Melas

After the Kumbh Mela of 2001, Divisional Railway Manager (DRM) of the erstwhile Northern Railway issued (September 2001) some recommendations for future guidance specifically for Allahabad station. These recommendations included inter-alia the following:

- At Allahabad station[94], platform no. 1 should be used exclusively for Mela Specials so as to ease the moving of Mela passengers from the enclosures to the train.
- Local administration should be insisted upon to prevent pilgrims returning from Mela area to arrive on the Civil Lines side only.
- Platform No.9/10 should be islanded. These platforms should have direct road access from the Civil Lines side so that passengers do not have to use the Foot Over Bridge (FOB) at all.

The records relating to the implementation of the above plan were examined by Audit and the related findings are discussed below:

2.2.6 Audit findings

2.2.6.1 Co-ordination

Audit scrutiny revealed that the Mela Officer/ NCR attended various meetings with the officials of State Government including Chief Minister, Chief Secretary of UP and other security officials of the State Government i.e. Commissioner for traffic, IG/Police, SSP/Kumbh Mela etc. Review of records of minutes of these meetings revealed that the issues such as running of special trains, smooth movement of pilgrims, provision of passenger amenities/ facilities and safety and security issues were deliberated upon by the Mela Officer/NCR during these meetings.

[94] Allahabad station has 10 platforms with entry to the station from both the City side and Civil Lines side.

Audit noticed that meetings were held by Chairman Railway Board/ Member Engineering/ Member Traffic with Commissioner/ IG Allahabad to review the arrangements being made by the Railways. Minutes of these meetings were not made available to Audit.

The Mela officer/ NCR was required to coordinate with the nodal officers of the other two zones (NR and NER) for the running of special Mela trains and to divert pilgrim traffic from Allahabad to the other Mela stations. No evidence was found on record by Audit regarding meetings amongst the nodal officers of the three Railways.

The NCR Administration in this regard stated (March 2014) that there was proper coordination between the nodal officers as coordinated train running was planned from all the stations in Allahabad area. The reply could not be verified as minutes of meetings held between the nodal officers were not made available to Audit. Further, the dates on which any meetings were held have also not been given by NCR Administration. In the absence of any records on the issue, it is not possible to assess the extent of planning and coordination carried out to assess the requirement of special trains so that the pressure of Pilgrims at Allahabad station is reduced.

2.2.6.2 Passengers Travelled

Records of Railway Administrations (NCR, NR, NER) regarding booking of tickets (PRS and UTS) revealed that about 41.04 lakh passengers travelled by trains during the Mela period. The details are tabulated below:

Table 2.8

Railway		No. of passengers travelled (in lakh)
NCR	Allahabad	24.64
	Naini	4.62
NR	Prayag	3.95
	Prayag Ghat	0.62
	Phaphamau	0.53
NER	Allahabad City	3.00
	Jhunsi	1.99
	Daraganj	1.69
	Total	**41.04**

(Source: Records of Divisional Commercial department of NCR/Allhabad, NR/ Lucknow and NER/ Varanasi)

From the above table, it may be seen that against the expectation of 34 lakh passengers, 41.04 lakh passengers actually travelled by train i.e. 21 *per cent* more than anticipated. It may also be seen that bulk of the pilgrims (71 *per cent*) were handled by NCR with 60 *per cent* being handled at Allahabad station itself.

The NCR Administration reported (June 2013) that 192 additional Unreserved Ticketing System (UTS) booking counters (Allahabad-67, Naini-32, Chitrakut Dham-4, Allahabad City-24, Prayag-21, Daraganj-20, Jhunsi-24) were provided by the three Railways to handle the additional rush of pilgrims. Audit scrutiny revealed that out of these 192 UTS booking counters, 13 were lying idle,

(Allahabad-01, Naini-04, Prayag Ghat-02, Prayag-06).

Further, in response to an audit query whether there is any system in place to identify the number of UTS tickets booked direction-wise at a particular time, no response has yet been received from the Railway Administrations.

The NCR Administration in reply also stated (March 2014) that booking counters at VIP gate of Allahabad were not made operational due to crowd constraints and six booking counters could not be set up at Naini due to paucity of space.

Above position clearly indicates that there were deficiencies in the implementation of the planning made by the Railway Administration itself. Idling of UTS counters at other stations may lead to accumulation of crowd at Allahabad station and higher risk of ticketless travel.

2.2.6.3 Passenger Amenities

Audit scrutiny of records revealed that 13 enclosures were established by the Railways at important Mela stations with basic facilities like booking counters, toilets, urinals, drinking water facility, vending stalls, lighting arrangements etc.

Audit scrutiny of records of various departments of the three Railways revealed that a total of 70 additional works were planned especially for the Mela. These included provision of additional booking counters, drinking water, sanitation, ambulances, temporary lighting at Mela area, CCTVs etc.

Examination by Audit revealed that out of the above 70 works, four works (extension of existing building at Civil Line side, provision of hydrant pipe line for coach watering facilities, provision of temporary dog kennel and fire fighting etc., Provision of computer rooms at Mela area) of NCR could be completed only after the commencement of the Mela. Three works of NR relating to heavy repair to Mela booking office, drains, booking office, drinking water taps etc. at Prayag station commenced in September/ October 2012, but could not be completed before the commencement of the Mela. The actual progress of the work at that time was 74 to 89 *per cent*. Railway Administration (NR), however, stated that civil services/passenger amenities works required for the Mela were completed.

Review of records of Commercial department of Allahabad division revealed that at Allahabad station, six main entrance gates along with the enclosures were constructed with colour coding for segregation of pilgrims based on the direction in which they would be travelling. In addition, signages and banners were installed in enclosures, entrance gates of Allahabad station and its approach roads.

Review of records of commercial department of NCR revealed that six direction wise enclosures at both sides of Allahabad station with basic amenities had been set up. These enclosures had the capacity to accommodate 1200 to 8000 passengers depending upon the size of the enclosures.

Physical verification by Audit at Allahabad station revealed that four enclosures were set up at City side and two at Civil Line side. Provision of medical first-aid posts was available at both sides of the station.

2.2.6.4 Crowd Management

Crowd Management is a major area of attention during any event where large gathering is expected. For effective crowd management the Railways needed to plan for the deployment of adequate number of security personnel, provision of proper barricading, closure of unauthorized entry/ exit points at stations, provision of adequate number of exit points to ease the rush from the station. As per letter of Superintendent of Police (SP), Allahabad[95], the Railways needed to plan for the deployment of adequate number of security personnel, provision of proper barricading, closure of unauthorized entry/exit point at stations, provision of adequate number of exit points to ease the rush from the stations.

Review of records of Commercial department (Allahabad) revealed control towers were established at Allahabad and Naini stations. Railway Administration (NCR) stated that the control towers were established for centralized monitoring of train movement and assessment of crowds at the Railway station. Control and coordination of security arrangements were also handled from here.

To ensure the above, officials of various departments were stationed at the control towers. They coordinated the arrangement of Mela trains, their placement (direction-wise) on different allotted platforms etc. Information regarding flow of pilgrims towards Allahabad station was regularly received in the control tower and transmitted to various levels.

Audit also observed that in its letter (May/October 2012) SP/Rly Allahabad emphasized the need of proper coordination between State Police/ GRP and Railways to ease the rush at the Allahabad station, especially on key bathing days by diverting pilgrims to other designated Mela stations. Coordination meetings were held between the State government and the Mela Officer of the Railways which included arrangements with GRP for crowd management.

Allahabad Station

Railway Administration (NCR) stated (May 2013) that GRP had prepared a traffic plan to manage the flow of pilgrims at Allahabad station. This plan included movement of passengers one way on specified areas, management of passengers to the designated enclosures and movement to the concerned platforms. They also stated that control and regulation of traffic and crowd management was the subject of State Government and the traffic was regulated as per the GRP plan.

Audit observed that the NCR Administration failed to establish proper coordination with the state authorities to block the influx of pilgrims towards Allahabad station and to divert them to other designated Mela stations.

Railway Administration (NCR) accepted (May 2013) that though entry of pilgrims was restricted from Civil Lines side on main bathing days, in spite of all efforts, the Mela passengers arrived from Civil Lines side as no check was exercised by the Civil management. Thus Railways had to face difficulty in controlling traffic due to unprecedented entry of pilgrims from this side.

Railway Administration (NCR) further stated (March 2014) that crowd

[95] Source: Superintend of Police, Railway/Allhabad's letter to Railway Administration dated May 2012 and October 2012

monitoring and regulation is basically related to law and order which is a state subject. Therefore, regulation of crowd at Allahabad station during Kumbh Mela was done according to traffic planning prepared by the GRP. It was also stated that state authorities were requested repeatedly through telephones as well as messages when crowd influx was increasing at Allahabad station and thus there was no lack of coordination with state security agencies.

The reply cannot be accepted as crowd management inside the station and at peripherals of the stations cannot be stated to be a state subject. Also, as per RPF Act, duties of RPF relating to security of passengers include providing access control, regulation and general security on the platforms, in passenger areas and circulating areas.

Records further revealed that on the basis of experience of Kumbh Mela 2001, the then DRM/Allahabad had advised (September 2001) that platform No.9/10 of Allahabad station should be islanded to enable the pilgrims direct access to this platform from the Civil Lines side. They would not need to use the FOB on Civil Lines side. In reply, NCR Administration stated that direct approach to platform No.9/10 was not feasible and thus not planned. The contention of the NCR Administration cannot be accepted as this reply was not supported by any feasibility study.

To control the entry of pilgrims into the station area, the Superintendent of Police (SP), Allahabad had also requested (May 2012) NCR Administration for closure of all unauthorized entry/exit points. Audit, however, observed (SP's letter dated 11th February 2012 to DRM/NCR) that a number of unauthorized entry points continued on Civil Line side of the Allahabad station. This may have resulted in entry of passengers from different points to the station.

2.2.6.4.1 Passengers' Safety and Security

To ensure safety and security of passengers, adequate number of security personnel need to be allotted. Audit examined the arrangements of deployment of RPF/RPSF at and around the designated Mela stations. Review of records revealed that total 1541 RPF/RPSF were deployed during the Mela period by the three Railways. Details of deployment of these security personnel by the three Railways is given below:

Table 2.9

Railway	Security personnel assessed (RPF/ RPSF)	Actually deployed	Shortfall in numbers	Shortfall as a percentage
NCR	1564	869*	695	44.44
NR	279	254	25	8.96
NER	791	418	373	47.15
Total	**2634**	**1541**	**1093**	**33.52**

**Out of 1564 RPF/RPSF assessed/demanded by the NCR, only 869 were available with the Railway for the deployment*

(Source: Records of office of Security Commissioner/ RPF of the NCR, NR and NER)

From the above Table, it is seen that the three Railway Administrations could not

deploy the security personnel at and around the designated Mela stations as per their assessment. There was a shortfall of 33.52 *per cent* in deployment of security staff over the three Railways (NCR, NR and NER).

Audit further noticed[96] that 716 GRP personnel and three companies of Para Military Force/ Provisional Armed Constabulary were also deployed during the Mela period for the management of passengers at the railway stations. These forces were under the control of the State Government.

Review of records by Audit revealed that on none of the auspicious bathing days were security personnel deployed at Allahabad station as per assessed requirement. Audit review further revealed that on the most auspicious bathing date (Mauni Amawasya – 10th February 2013), only 513 RPF/RPSF personnel were actually deployed against the assessment of 995 RPF/RPSF security personnel for deployment at Allahabad station i.e. **a shortfall of 48 *per cent* was noticed**. Of these 513, only 268 security personnel were deployed inside Allahabad station including the FOBs. This massive shortfall of security personnel was one of the reasons why the Railway Administration was unable to control entry of pilgrims into the station on that day.

However, no comments were made by the NCR Administration with regard to deployment of less number of security staff which clearly indicates failure on the part of Railway to deploy the required number of security personnel. Audit further noticed that after the stampede occurred on 10th February 2013, 329 additional security personnel were deployed. Subsequently, even after the stampede, though the security personnel were increased, they were still less than that assessed by the three Railway Administrations themselves.

2.2.6.5 Running of Special Trains

Railways had expected 34 lakh passengers to attend the Mela. They had planned special Mela trains to handle the large crowd. In fact, as per ticket bookings, about 20 *per cent* more passengers i.e. 41.04 lakh travelled by trains during the Mela period. This would have needed more special trains.

Review of records revealed that, to cater to the additional rush of pilgrims during the Mela period, a total of 1100 Mela special trains (Inward and Outward) were run by the three Railways (NCR-878, NR-81, NER-141). With regard to the Outward Mela special trains from the designated Mela stations including Allahabad, the three Railways had planned to run 471 Mela Special Trains (NCR-328, NR-43, NER-100). Against this projection, a total of 576 outward special trains (NCR-462, NR-46, NER-68) were actually run during the whole Mela period.

However, review of records by Audit revealed shortfall in the Special Trains run by the three Railways on the three important bathing days (Makar Sakranti, Mauni Amawasya, Basant Panchami) and immediately thereafter when larger crowds were anticipated at Allahabad area. The shortfall is given in the Table below:

[96] Source: SP/Railway, Allahabad's letter dated 12 July 2013

Table 2.10 - **Special Mela Trains run by the three Railways on Important bathing days**

Bathing Days	Dates	Projected			Actually run			Shortfall (-)/Excess		
		NCR	NER	NR	NCR	NER	NR	NCR	NER	NR
Makar Sankranti	14.1.13	14	2	2	18	1	1	4	(-)1	(-)1
	15.1.13	19	3	0	9	0	0	(-)10	(-)3	0
	16.1.13	7	0	0	0	0	0	(-)7	-	0
Total	**3 Days**	**40**	**5**	**2**	**27**	**1**	**1**	**(-)13**	**(-)4**	**(-)1**
Mauni Amawasya	10.2.13	45	**14**	15	45	**11**	12	0	**(-)3**	(-)3
	11.2.13	45	**10**	9	43	**13**	10	(-)2	3	1
	12.2.13	30	4	4	26	**6**	6	(-)4	2	2
Total	**3 Days**	**120**	**28**	**28**	**114**	**30**	**28**	**(-)6**	**2**	**0**
Basant Panchami	15.2.13	31	3	4	33	2	4	2	(-)1	0
	16.2.13	27	3	1	23	**3**	1	(-)4	**0**	0
	17.2.13	14	1	0	12	3	1	(-)2	2	1
Total	**3 Days**	**72**	**7**	**5**	**68**	**8**	**6**	**(-)4**	**1**	**1**

(Source: Records of Divisional Operating department of NCR/Allahabad, NR/Lucknow, NER/Varanasi)

Though there was no shortfall in the running of Mela Special trains on 10th February 2013, it was seen that the Mela officer/ NCR had assured (09-10-2012) SSP, Allahabad that NCR would run 50 special trains on the occasion of Mauni Amavashya. However, only 45 special trains were projected and run[97] by NCR on that day. It was also observed that out of the 45 special trains run by NCR on that day, 31 (69 *per cent*) were run from Allahabad station and only 14 trains were run from Naini station.

Audit further noticed that over NCR, initially 417 special trains were actually run against the projection of 328 trains. It was reported by Railway Administration (NCR) that additional 45 special trains were run in quick succession after the stampede on 10th February 2013.

Audit also observed that during the meeting with the State officials, Mela Officer/ NCR stated (December 2012) that the Railways had planned to stagger the return of pilgrims coming on the most auspicious occasion of Mauni Amawasya (10.02.2013) over three days (10th, 11th and 12th of February 2013) by running 68 special trains.

Railway Administration (NCR) in reply to the draft paragraph stated (March 2014) that the number of Mela special trains to be run was assessed based on projection of crowd given by the state government, available line capacity as well as availability of designated Mela stations of NR, NER and NCR. The plan arrangements were reviewed by Railway Board, Parliamentary Standing Committee and State Government (Commissioner/ Allahabad) and were

[97] (Source: Operation Department (NCR) letter of March 2013)

considered to be adequate. They stated that the running of additional special trains can only be justified on the basis of sale of tickets direction-wise.

The contention of NCR Administration cannot be accepted as the arrangements regarding deployment of security personnel, setting up of additional UTS counters and running of Mela special trains were not as per the plan made by the NCR Railway Administration itself. Moreover, no evidence has been found on record that suitable steps were taken by the Railway Administration to divert the rush to other Mela stations except for announcements regarding the trains being run from all stations.

2.2.6.5.1 Movement of Special Trains at Allahabad Station

Review of records of Allahabad station revealed that this station handles more than 200 trains (Mail/Express, Ordinary passenger and freight trains) per day. Further, Allahabad lies on the Delhi-Howrah main line, where line capacity is already over-saturated. In Audit Report (No.PA26 of 2008-09 'Signalling and Telecommunication in IR), it was reported that line capacity utilization in sections around Allahabad exceeds 130 *per cent*. Keeping in view the over-saturation on the section, Railways needed to at least partly divert freight trains to ensure smooth running of Mela Special trains. This was imperative for auspicious bathing days as rush of Special trains was expected to be more.

Review of records by Audit of movement of trains at Allahabad station during 1st February to 20th February 2013 revealed that Allahabad station handled 1272 freight trains in addition to the Mela special trains (inward and outward) and 2169 regular mail/express trains. It is evident that no alternate arrangements were planned by the NCR Administration for the movement of freight trains to ease the path for Mela Special Trains. This in fact adversely impacted the smooth running of Mela Special trains as these were an addition on an already over-burdened system.

However, NCR Administration in reply stated (March 2014) that freight trains were run as per Railway Board's directives for carrying essential commodities like coal. It was also contended that only 24 freight trains were run instead of 42 to 45 run on normal days and most of the freight trains were dealt with via Main Line or yard lines and no platform was utilized for their movement.

This contention cannot be accepted as from scrutiny of records of operating department of Allahabad division, audit noticed that total 1272 freight trains i.e. on an average 64 trains were run per day during 1st February to 20th February 2013. Moreover, running of freight trains via main line/ yard lines would not ease the path for smooth movement of Mela special trains, especially during the main bathing days when a much larger number of special trains was to be run.

Audit observed that after the stampede incident on 10.02.2013, there was nil movement of freight trains on 11.02.2013 and also decline in the movement of freight trains was noticed on subsequent days at Allahabad station. Thus, scope existed for diversion of traffic avoiding Allahabad station. Lack of foresight in diverting freight trains resulted in over burdening the already over saturated sections and reduced the outward movement of special trains from Allahabad

station.

Audit reviewed the placement/departure of Mela special trains at Allahabad station. It was noticed that, out of 249 special trains run during 9th February to 11th March 2013, 137 special trains were detained at the platforms for more than an hour. Particularly, on the 10th February 2013 (day of the untoward incident of stampede), 10 special trains occupied four out of ten platforms of the Allahabad station. This in turn further delayed trains which were awaiting entry to the station. Thus, the movement of trains was very slow at Allahabad station allowing a massive build up of crowd at each platform.

In reply, Railway Administration (NCR) stated that special trains were placed on the platform on the demand of the commercial department as per the strength of the crowd in the respective enclosures. After the placement of special trains on the platform, the trains were only dispatched after the assurance given by the commercial and security departments that passengers had safely boarded the trains. Passenger safety was the primary concern. It was also stated that the train started when Commercial Inspection Traffic/ Kumbh Mela available on platform informed that the train was full (approx. 3000 passengers). In this process, sometimes the time consumed took more than half an hour.

It was a fact that there was a large influx of crowd at Allahabad station during the Mela period. Placement and departure of Mela special trains in such circumstances could have been quicker. The detention of special trains on the platforms for more than an hour indicated improper time management due to slow pace of coordination between commercial, security and operating departments resulting in ineffective crowd management.

2.2.6.6 Medical Facilities

During scrutiny of records Audit noticed that a total number of 32 doctors were posted at and around the designated Mela stations during the whole Mela period. The plan also included provision of nine ambulances at Mela stations. The details are given below:

Table 2.11

Railway	No. of doctors	No. of Medical Staff	No. of Ambulances
NCR	13	47	5
NER	9	**68**	3
NR	10	90	1 (at Prayag station)

(Source: Records of Divisional Medical department of NCR/Allahabad, NR/Lucknow, NER/Varanasi)

Audit also observed that Medical department of NCR planned to establish six first-aid posts at Allahabad. These posts were to be manned by doctors and para medical staff for the pilgrims and Mela staff at both sides of the Allahabad station, DSA ground near Allahabad station, Naini station and at Sangam area.

During physical verification, Audit revealed that one doctor along with other

medical staff was deployed round the clock on shift basis at each of the six first-aid posts. Audit however, noticed that doctors and medical staff were not posted at the enclosures established near the Allahabad station.

2.2.6.7 Disaster Management

Disaster in Railways in defined as a serious train accident or an untoward event of grave nature, either on railway premises or arising out of railway activity, due to natural or man-made causes, that may lead to loss of many lives and/or grievous injuries to a large number of people, and/or severe disruption of traffic etc., necessitating large scale help from other Government/ Non-government and Private Organizations.

In Railways, disaster includes –

(a) Natural disaster e.g. Earthquakes, Floods, Cyclone etc.;
(b) Train accidents, caused by human/ equipment failure, affecting train movements with loss of human life or property or both;
(c) Manmade disasters e.g. Acts of Terrorism and sabotage, causing deliberate loss of life and/or damage to property.

It is evident from the above definition that in the Railways, the definition of disaster does not include occurrence of a stampede. Thus, their disaster management plan does not cover the risks involved in the management of huge crowds at Railway stations.

In reply, NCR Administration also accepted (March 2014) that there was no 'Railway Disaster Management Plan' for Kumbh Mela. Division-wise as well as Zone-wise disaster management plan was prepared in terms of the recommendations of the High Level Committee on Disaster Management over Indian Railways. The Kumbh Mela Administration had held discussions and meetings with National Disaster Management Agency for the Kumbh Mela.

2.2.7 Conclusion

The Mela Office/ NCR had made elaborate plans to handle the large number of pilgrims expected to attend the Maha Kumbh Mela 2013 at Allahabad. This included additional RPF/RPSF personnel to handle the huge pilgrim influx and running of Special Mela trains were planned to handle the large influx of pilgrims. The number of Mela trains to be run from Allahabad station was based on the premise that a large number of pilgrims would be diverted from Allahabad to other designated Mela stations. For the special bathing days, when a larger than normal crowd was expected, the Railways had planned to stagger the outflow of pilgrims from Allahabad by running extra Mela Special trains on three consecutive days after the bathing date.

The NCR Administration was, however, unable to ensure that pilgrims were diverted away from the Allahabad station. They failed to establish proper coordination with the State authorities to block the influx of pilgrims towards Allahabad station and to divert them to the other seven designated Mela stations or to stagger their return as per their plan. No evidence has been found that any proper steps were taken by the Railway Administration to divert the rush to other Mela stations/'night shelters'. Only announcements regarding the trains being run

from all stations were regularly made.

The stampede that occurred at the station highlights the lack of close coordination and cooperation with the State Government. Further, effective crowd management required close cooperation and coordination between both the security wings of the Railways i.e. the RPF and GRP. On the day of Mauni Amawasya, this problem was further accentuated by the presence of substantially less security personnel than that assessed by the Railway Administration itself. It also focuses on the absence of a specific disaster management plan. In fact, Railways' definition of disaster does not cover a manmade disaster like a stampede.

Recommendations

The disaster management plan of Railways does not cover the risks involved in the management of huge crowds at Railway stations. In fact, the Railways require to formulate a well-thought out Disaster Management Plan for immediate response to any unexpected incident which can occur due to the pressure of large crowds. This plan would need to include provision of quick medical treatment; and adequate and effective deployment of security personnel to ensure timely action for crowd management.

2.3 Southern Railway (SR): Loss due to under-utilization of Parcel Cargo Express Trains

Failure of SR Administration to ensure the availability of satisfactory operational arrangements for running of Parcel Cargo Express Trains (PCET), adversely impacted the revenue earnings to the tune of ₹314.64 crore besides loss of parcel charges to the tune of ₹15.44 crore

Railway Board decided (February 2007) to attract piecemeal parcel traffic by providing value added door to door services[98] through private operators and evolved a policy for leasing of Parcel Cargo Express Trains (PCET). The scheme was to be made customer friendly through provision of value added assured services with guaranteed transit time at competitive rates. As per the policy[99], in order to provide customer friendly single window service to lease holders, Deputy Chief Commercial manager/ Freight Marketing or a commercial officer may be nominated to coordinate with other departments to solve/ redress their problems/ grievances. In case of any dispute, the matter may be brought to the notice of higher Authorities.

Southern Railway Administration initiated efforts for leasing PCET in March 2007 and also floated several tenders during May 2007 to September 2010. A suitable response could be received in September 2010 only. SR Administration entered into four contracts (November/ December 2010) for a period of three years[100] for leasing PCET over four routes[101] over Southern Railway and other Zonal Railways.

Audit reviewed the records connected with these four lease contracts and noticed that-

(a) The lease service for one route from Erode to Vapi remained operative during 5th February 2011 to 18th January 2012 only against the approved period from 5th February 2011 to 4th February 2014. Audit observed that-

(i) Although loading/unloading of parcels by lessee at one intermediate station on each Zonal Railway on the route was permitted[102], Central Railway Administration did not permit (except for three months) the lessee to utilise Kalyan station as an intermediate station. Further, the intermediate station permitted by the Western Railway Administration (Jogeswari) could not be utilised as it did not fall on the route.

(ii) A fixed path with a scheduled time table was required for operating PCET service. Although the PCET service commenced on 5th February 2011, the

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[98] In door to door service the contractor collects the parcel from the door of sender, loads/ unloads it in train at sending/destination stations and delivers the parcel at the door of the recipient.

[99] Paragraph No.21.1 of policy circular

[100] From the date of commencement of lease services

[101] Milavittan- Kankaria Fort, Erode—Kalyan, Ernakulam Marshalling yard—New Guwahati Central and Erode -Vapi

[102] Paragraph No. 16.1 0f policy circular

time table was prepared and implemented by the Chief Operating Manager, Southern Railway belatedly in May 2011.

(b) The lease services could not be commenced in respect of three other routes[103] due to administrative reasons such as-

(i) Inability to get no objection certificates (NOC) from other Zonal Railways involved in the routes,

(ii) Inability to sort out problems of hold up of rakes and congestion in Northeast Frontier Railway and

(iii) Non-availability of adequate infrastructure facilities at Erode to run PCET on Erode –Kalyan route. SR Administration decided to wait till stabilisation of lease services on Erode-Vapi route.

(c) Average transit time for operation of PCET from Erode to Vapi was more than six days as against the road transit time of 72 hours. The actual time per trip for operating PCET on Erode – Vapi – Erode route ranged between 235 hours and 444 hours as against the 170 hours prescribed by Railway's Commercial Authority[104]. The average detention of PCET at Salt Cotaurs station and Erode station was 15 hours per trip and 48 hours per trip respectively against the allowed time of seven hours and 24 hours per trip respectively. In view of delay in framing of/adherence to a time table and excess transit time which was not profitable to the lessee, the lease contract was terminated (March 2012) after operation of only 75 trips against the admissible 168 trips.

It is evident that SR Administration could not coordinate with other Zonal Railways for removal of operational constraints encountered in running of PCETs and thus failed to solve the issues either through coordination with Zonal Railways or through intervention of higher Authorities.

Review of records at Railway Board revealed that the operational constraints encountered by Southern were also not communicated to Railway Board for their solution. This resulted in failure of the scheme in Southern Railway.

In respect of the only PCET service introduced between Erode and Vapi, where the contract was terminated[105] after 14 months, early termination of the contract due to administrative problems[106] resulted in SR Administration being deprived of revenue (₹43.61 crore) for the remaining months (22) on account of non-operation of PCET. In addition, operation of PCET on Erode-Vapi route for 75 trips during the period of operation instead of the admissible 168 trips resulted in loss of lease charges[107] to the extent of ₹ 15.44 crore[108]. Further, non-operation of PCET

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[103] Milavittan – Kankaria Fort-, Erode –Kalyan and Eranakulam Marshalling yard –New Guwahati Central

[104] Deputy Chief Commercial Manager/Rates & Freight Management

[105] As per terms of contract- item No. 13, the contract could be terminated on receipt of two months prior notice from the lessee.

[106] As mentioned in sub-paragraph (a) above

[107] Lease charges are payable to Railway on round trip basis

[108] As per lease contract for PECT on ED-VAPI route, 168 trips were to be performed in 14 months against which 75 trips were performed. Loss of lease earning for 93 trips not performed was ₹ 15.44 crore (93x ₹0.166 crore)

services on three routes due to administrative reasons[109] deprived SR Administration of a potential earning of ₹271.03 crore[110].

When the matter was taken up (July 2013) with SR Administration, they stated (April 2014) that-

- Parcel Vehicles (VPs) are always on demand and hence are operated without any idling.
- There were various reasons for early termination of contract/ under-utilisation in respect of PCET operated on Erpode - Vapi route.
- Since no exclusive rakes were procured /allotted for movement on three routes, loss of earnings is hypothetical.

Railway Administration (SR) reply is, however, not acceptable as-

- Although Parcel Vehicles (VPs) are operated without idling, the scheme for leasing PCET was implemented by Railway Board to augment the earning potential.
- The lessee got the contract terminated for the PCET on Erode-Vapi route on account of administrative problems not resolved by SR Administration. The utilisation of rake for lesser trips was also on account of excessive transit time.
- The award of contracts for operation of PCETs on four routes clearly establishes the fact that there was substantial patronage from the trade which should have been encashed.

Thus, non-commencement of PCET services on three routes and early termination of lease contract in respect of PCET on one route resulted in loss of revenue of ₹ 314.64 crore[111] besides loss of earning capacity to the tune of ₹15.44 crore towards under-utilization of rakes of PCET operated. Due to lack of coordination amongst the Zonal Railways and non-enforcement by the Railway Board the intended objective of the Railway Board for providing value added service through private operators remained unfulfilled in Southern Railway.

The matter was brought to the notice of Railway Board in May 2014; their reply has not been received (July 2014).

[109] As mentioned in sub-paragraph (b) above

[110] This is total value of three contracts for PCETs on three routes (₹68.04 crore+ ₹142.34 crore+ ₹60.65 crore) that were not operated.

[111] Loss of earnings in respect of PCETs on three routes which could not be operated due to Administrative problems (₹ 271.03) plus loss of earnings (₹43.61 crore) due to termination of lease contract of PCET on ED-VAPI route 22 months before the scheduled date.

2.4 Western Railway (WR): Loss due to incorrect apportionment of revenue between Railways and Pipavav Railway Corporation Ltd.

Apportionment of freight share on the basis of booked route instead of actual carried route resulted in extra sharing of revenue of ₹ 39.88 crore

Pipavav Railway Corporation Ltd(PRCL) (Project Railway) an SPV[112] of Indian Railways with the Gujarat Pipavav Port Ltd(GPPL) was set up to construct, maintain and operate 265 kilometer long Broad Guage Railway line connecting the Port of Pipavav to Surendranagar Junction of Western Railway.

PRCL signed a Concession Agreement with the Ministry of Railways in June 2001. Clause 4.2(h) of the Concession Agreement stipulates that PRCL has the right to receive its share, in accordance with the rules of inter–railway apportionment of earnings of the traffic from freight traffic originating, terminating and moving on the Project Railway including haulage charges collected from container operations.

Para 868 (B) (ii) of IRFC[113] specifies the criteria for apportionment of inter-Railways traffic in case of rakes that are diverted and carried by longer route. It stipulates that earnings should be apportioned between respective Zonal Railways on the basis of actual kilometres run by the Goods Train. Accordingly, in case of traffic booked via route falling on the Project Railway and a Zonal Railway that is carried via longer route, the percentage of revenue apportionment to Project Railway will depend on the actual distance, it is carried on the Project Railway.

Scrutiny of records of traffic booked by Project Railway to various destinations revealed that:

- The traffic booked and charged by the shortest route (viaViramgam-Palanpur –Marwar Junction) was carried via longer route (via Viramgam-Geratpur – Godhara-Nagda) covering extra distance of 245 Kms on Zonal Railway.
- In contravention of Para 868(B) (ii) of IRFC, apportionment was being done on the basis of distance of the booked route. This resulted in higher apportionment to the Project Railway amounting to ₹72,55,854 for 173 rakes during the period January 2012 to March 2012.

The total excess apportionment to the Project Railway for 9509 rakes diverted during the period April 2009 to March 2013 amounted to ₹39.88 crore[114] .

When the issue was taken up with WR Administration in April 2013, they stated (October 2013) that traffic had been diverted due to Railways' operational requirement. Hence, the issue of higher apportionment payment to the SPV needs

[112] Special Purpose Vehicle
[113] Indian Railways Finance Code Vol. I
[114] No. of rakes diverted during the period x Average excess share of freight per rake as per actual calculation for 3 months i.e. Jan 2012 to March 2013(9509 X41941 = ₹ 398816975)

to be worked out in consultation with all the stake holders due to diversion of traffic through longer route.

The contention of the WR Administration is not sustainable as the Concession Agreement entered into by Ministry of Railways with PRCL clearly states that PRCL will receive its share of freight earnings in accordance with the rules of inter-railway apportionment of earnings. These rules clearly stipulate that earnings be apportioned between respective Railways on the basis of actual kilometre run by the Goods Trains.

The matter was brought to the notice of Railway Board in June 2014; their reply has not been received (July 2014).

2.5 South East Central: Railway (SECR) — Improper planning of traffic facility works

Inadequate/ poor planning of traffic facility works at a cost of ₹16.22 crore to minimize the detention of rakes at Kirodimalnagar station of SECR resulted in excess detention to the extent of 1.11 lakh wagon days in respect of detained rakes during 2009-10 to 2012-13

The operational effectiveness of Railways depends on the optimum use of its rolling stock. It is, therefore, imperative to ensure that the wagons are placed for loading/ unloading immediately on arrival at a station and removed/ dispatched to their destination as soon as the loading/unloading is completed.

Kirodimalnagar (KDTR) station is situated on the Mumbai-Howrah trunk route at a distance of 125 Km from Bilaspur (BSP). The private siding of M/s Jindal Steel and Power Ltd (JSPL) is served by this station.

The gradual increase of traffic at the JSPL siding and establishment of other industries in the area led to detention of rakes at KDTR station as the existing infrastructure in KDTR station could not handle the increased traffic. To overcome the problem of detention at KDTR station, the SECR Administration had undertaken (2006-07 and 2008-09) two traffic works viz., 'Additional loop line of KDTR station' and 'remodelling of the station for dealing with additional traffic of JSPL siding'. The works were completed by December 2010 and March 2011 respectively at a total cost of ₹16.22 crore.

Audit scrutiny of records of KDTR station revealed the following:

- After completion of the above traffic facility works, detention of rakes could not be reduced and instead increased. The detention of rakes had increased to 16 to 52 hours during April 2011 to March 2013 after commissioning from 12 to 26 hours during the period of April 2009 to March 2011 i.e. before the commissioning of the traffic works. The traffic facility works constructed could not handle the increased traffic, even though the works were designed to handle a much larger volume (inward – 7.5 rakes/day, outward – 2.8 rakes/day) of traffic than the actual traffic being handled (inward – 5.67 to 6.54 rakes/day, outward – 2.03 to 2.22 rakes/day).
- At the time of execution of the above traffic works, JSPL had proposed (April 2007) modification work in their in-plant yard to minimize detention. The

modification works were required to be undertaken by JSPL siding only after the approval of Railway Administration (SECR). After a lapse of five years of the proposal, Railway Administration opined (September 2012) that on completion of the modification works, detention to both inward and outward traffic of JSPL siding would be reduced substantially. However, the proposal is yet to be approved (May 2013).

Thus, incurring an expenditure of ₹16.22 crore on the two traffic works to minimize the detention did not serve the purpose. Poor planning of these traffic works failed to mitigate the problem of detention of rakes. Rakes were detained for 1.11 lakh wagon days[115] (from 2009-10 to 2012-13). Audit has assessed a loss of earning capacity of ₹35.07 crore due to detention of these rakes based on the Statement Nos. 15 and 24 of the Annual Statistical Statement of Indian Railways.

The matter was brought to the notice of SECR Administration in August 2013. While accepting (October 2013) the fact of increased detention at KDTR station, Railway Administration contended that the detention was the result of overall growth of passenger and goods traffic in the section. The inward and outward rakes dealt with at JSPL siding has substantially increased during the last four years (2009-10 to 2012-13).

The above contention of SECR Administration is not tenable. The traffic facility works were constructed with a view to handle 7.5 rakes per day in inward direction and 2.8 rakes per day in the outward direction. However, though the actual traffic (inward – 5.67 to 6.54 rakes per day and outward – 2.03 to 2.22 rakes per day) during the last four years (2009-10 to 2012-13) was less than that of the assessed traffic while proposing the traffic facility works, the detention of the rakes had increased.

Moreover, SECR Administration in November 2011 admitted that the additional loop created could not be used for outward rakes due to non-provision of cross-over at Bilaspur end connecting Up and Down main lines. Audit, however, observed that the provision of cross over at Bilaspur end was not included at the planning stage of the work. Thus, detention of rakes at Kirodimalnagar station could not be reduced due to inadequate/ poor planning of works implemented to mitigate the problem of detention in spite of incurring a capital investment of ₹16.22 crore. Further, JSPL's proposal for modification works in their in-plant yard to minimize detention was pending for over six years with Railway Administration. The proposal was moving from one department to another for their consent and finally after a lapse of five years Railway Administration opined (September 2012) that the modification works would reduce the detention. This shows the casual approach of SECR Administration in taking decision for a work which could reduce the detention of traffic at no cost to them.

The matter was brought to the notice of Railway Board in June 2014; their reply has not been received (July 2014).

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[115] Detention of wagon days for loaded wagons was calculated on the basis of time gap between actual release and departure after allowing 3 hours on operational ground.

2.6 Southern Railway (SR): Under utilization of coaching assets due to lack of maintenance facilities

Non-provision of a pit line at Kozhikode (CLT), SR Administration to carry out maintenance of Janshatabdi rakes at Thiruvanathapuram central (TVC) station resulted in under–utilization of coaching assets and consequential loss of potential earnings of ₹ 15.81 crore

The Railway Board vide their letter dated 31 January 2007 revised maintenance pattern of coaching trains (2007)[116]. These norms stipulate that Passenger trains may be permitted to run up to 3500 Km in a round trip with terminal attention at the other end. Mandatory under-gear examination and brake system maintenance at pit line[117] are required to be done only at primary end[118] after completing 3500 Km journey or 96 hours after the issue of original Brake Power Certificate (BPC), whichever is earlier.

Jan Shatabdi Express train, with both AC and non-AC sitting accommodations is an affordable variety of the Shatabdi Express train. The train rake is run point to point to provide convenient day time intercity travel.

The distance between Kozhikode (CLT) and Thiruvanathapuram (TVC) is 413 Km. In view of increasing demand of passengers, one pair of Jan Shatabdi Express train was proposed in the Railway Budget (2010-11) to run five days a week from CLT to TVC and back to CLT. SR Administration introduced (January 2011) one pair of Jan Shatabdi trains (No. 12081/12082). The same rake completed the circuit from CLT to TVC and back to CLT on the same day (except Wednesday and Sunday). However, pit line facility for the mandatory examination of rake and maintenance of under-gear and brake system once in 96 hours was not available at CLT, the primary end. Instead it was available at TVC, the secondary end[119]. As a result, the rakes had to be despatched from CLT to TVC on Tuesdays and Saturdays and detained there for 24 hours. As a consequence, there was curtailment of the trip for two days in both directions.

In this connection, Audit observed that another pair of Jan Shatabdi Express train (No.12075/12076) runs daily from TVC to CLT and back to TVC. Daily running of this pair of Jan Shatabdi train between the same stations has been possible due to availability of pit line facility for the mandatory examination of rake and maintenance of under-gear and brake system once in 96 hours at TVC, the primary end. If SR Administration had considered the need of a pit line at CLT before the introduction of Jan Shatabdi Express train service (12081/12082) and constructed a pit line there, recurring loss and travelling public inconvenience on account of non-running of trains for two days a week could have been avoided. Audit observed that non-construction of pit line at CLT resulted in under-

[116] Railway Board letter No. 95/M(C)/141/1 dated 31.01.2007

[117] Pit line is a Rail line on Railway station which has sufficient space below the track for workers/equipments for carrying out mandatory primary examination and maintenance of under-bogie parts of the coaches including brake power system.

[118] The station from where outward journey originates.

[119] The destination station

utilization of available coaching assets for two days a week and loss of potential earnings of ₹15.81 crore[120] during the period January 2011 to June 2013.

On this being pointed out (July 2013), SR Administration stated (December 2013) that availability of pit line facility could not have provided train service on all the seven days of a week as-

- in view of consistently high speeds, Shatabdi/ Jan Shatabdi Express trains undergo examination during day time;
- provision of a pit line is a highly complex matter having financial and operational implications. Further, pit lines are created only on natural and logical terminals and mindless proliferation of pit line in intermediate stations leads to sub-optimal utilisation of investments and resources.

Railway Administration's (SR) contention is not acceptable as-

- rake of another Jan Shatabdi service (No 12075/12076) originating from TVC and running in TVC-CLT-TVC circuit is being maintained at night;
- Financial and operational implications involved in the provision of an asset are the subjects to be dealt with by SRA during assessment for financial and technical viability. This was not done in the instant case. Further, the contention that pit lines are created only on natural and logical terminals is not in order as SR Administration has provided a pit line at Erode, an intermediate station handling very low traffic.

Thus, the failure to provide a pit line facility at CLT before the introduction of Jan Shatabdi train service resulted in under utilization of coaching assets, inconvenience to travelling public and consequential loss of potential earnings of ₹ 15.81 crore for the period from January 2011 to June 2013.

With effect from 2nd August, 2013, the train service was extended from Kozhikode (CLT) to Kannur (CAN)[121] and now runs ex-Kannur to Thiruvanathapuram (TVC) and back to Kannur via Kozhikode. With this extension, the problem of maintenance[122] still persists as no pit line is available at Kannur also and the train runs only for five days a week. The under utilization of coaching assets and loss of earnings would continue till the provision of required pit line facility at Kozhikode.

The matter was brought to the notice of Railway Board in May 2014; their reply has not been received (July 2014).

[120] Loss of earnings due to non-running of train for two days a week between 21 January 2011 to 30 June 2013.-508 trips x per trip earning (@₹ 3.06 lakh up to 31 March 2013 and @ @₹ 3.61 lakh from 1 April 2013 to 30 June 2013)

[121] Kannur(CAN) is 89 Kms away from Kozhikode (CLT) on Palakkad- Mangalore Central route

[122] Under-gear examination and brake power maintenance at pit line

2.7 South East Central: Railway (SECR) — Short collection of fares on booking of special trains

Incorrect application of Rules led to loss of Railway Revenue to the tune of ₹3.40 crore on account of short collection of fare on 'Special trains' booked by the private parties

As per Indian Railway Conference Association (IRCA) Coaching Tariff, the fare for 'Special trains' shall be computed on 'Point to Point' basis[123] with full adult Mail/Express fare of the concerned class for the actual number of passengers travelling or carrying capacity of the coaches whichever is more. The Tariff also stipulates that two halts of maximum duration of 20 minutes in each block of 1000 KM or part thereof will be exempted for the purpose of calculating point to point charges and detention charges.

Audit scrutiny of the records of five stations (Korba, Ambikapur, Champa, Raigarh and Raipur) of SECR revealed (December 2012) that the fare for the booking of 15 Special trains, booked during the period January 2008 to April 2011, was not being calculated on a 'point to point' basis. Instead, the fare was calculated by dividing the whole distance of the journey in two parts i.e. origination to destination station and back, which is in violation of the IRCA Coaching Tariff. This resulted in a loss of ₹3.20 crore towards short collection of fare on Special trains. Audit also noticed that out of these 15 cases, only in two cases, short collection was detected (September 2010) by SECR Administration when the parties claimed refund of security deposit. SECR Administration raised (March 2011) debit (₹0.76 crore) against these two parties. However, the debit raised is yet to be realized (July 2013).

Further scrutiny (January and March 2013) of records of three stations (Gondia, Korba, Durg) of SECR revealed incorrect application of rules in charging different components of fares such as base fare, pantry car charges, empty haulage charges, detention charges etc. in booking of three special trains booked during October 2008 to December 2012. This resulted in short collection of fare of ₹0.09 crore.

The above cases of incorrect application of rules in charging fares on booking of Special trains point to weak internal control mechanism of SECR Administration in checking collection and accountal of fares as per rules.

The matter was referred to SECR Administration in August 2013. In reply they accepted (February 2014) the audit contention and stated that responsibility will be fixed on the concerned staff. They also stated that to recover the differences of fare as assessed by Audit, civil suits against the parties will be filed and divisions were advised (September/ October 2013) to initiate necessary action. The SECR Administration further appreciated the suggestion of Audit regarding

[123] Calculation on Point to Point basis means fare should be charged considering the distance of each section where halt is made instead of taking the whole distance travelled. For example, if a passenger travels from A to D with halting at B and D, then fare on point to point basis will be for A to B, B to C and C to D instead of considering total distance from A to D.

strengthening of the existing internal control mechanism and stated that divisions are closely watching the calculation of fare for booking of special trains.

In spite of the above reply, no action regarding filing of civil suits has been taken (as of March 2014) by the SECR Administration. Further, test-check by audit (January 2014) revealed one more case of wrong charging of fare in booking of 'special train' (booked in November 2013) involving loss of ₹0.11 crore which increased the revenue loss to ₹3.40 crore. This shows that internal control mechanism has yet to be strengthened.

Thus, incorrect application of rules and failure of internal control mechanism by SECR Administration led to a revenue loss of ₹3.40 crore towards short collection of fares on 'special trains'.

The matter was brought to the notice of Railway Board in June 2014; their reply has not been received (July 2014).

Chapter 3 – Engineering – Open Line and Construction

The Engineering Department of Indian Railways is responsible for maintenance of all fixed assets of Indian Railways such as Tracks, Bridges, Buildings, Roads, Water supply etc. vis-à-vis for construction of new assets such as new lines, gauge conversion, doubling and other expansion and developmental works. Major policy decisions of the Engineering Department are taken by the Railway Board under supervision of Member Engineering who is assisted by Additional Member (Civil Engineering) and Additional Member (Works) and Advisor (Land & Amenities).

At Zonal level, the Engineering Department is headed by Principal Chief Engineer (PCE) under General Manager of the concerned Zonal Railway. The PCE is assisted by various chief engineers for track, bridge, planning, track machines, general matters etc. In addition, each Zonal Railway has a construction organization headed by a Chief Administrative Officer/Construction who is responsible for major construction works including survey works within concerned Zone and is assisted by various chief engineers (construction).

The total expenditure of the Civil Engineering Department during the year 2012-13 was ₹ 48640.82 crore. During the year, apart from regular audit of vouchers and tenders etc., 1438 offices of Engineering department including Construction Organization of the Railway were inspected by Audit.

This chapter includes a Thematic Audit on **"Works implemented under Material Modification"** conducted across 12 Zonal Railways. Audit scrutiny revealed that Ministry of Railways has, in a number of cases, flouted the procedure laid down for both formulation and approval of projects. Even preliminary procedures like conducting a Techno Economic Survey have not been followed. In fact the standard procedure of taking approval of the Planning Commission before inclusion of a work in the Annual Works Programme was also not followed. Audit also revealed that the cost of the Material Modification works even exceeded the cost of the original sanctioned projects.

In addition, this chapter includes eight Paragraphs, highlighting cases of individual irregularities/deficiencies pertaining to construction works, non-recovery of dues, excess payment on account of price escalation and purchase of ballast etc.

3.1 Works implemented under Material Modification in Indian Railways[124]

Executive Summary

The procedure laid down by the Indian Railways for approval of projects emphasises the need for taking up only financially remunerative projects. Several Parliamentary Committees have also in the past reiterated the need to take up only those new projects which are financially viable and do not lead to the spreading of Railway's scarce resources thinly across a large number of projects. The Twentieth Report of the Standing Committee on Railways on the Demands for Grants for the year 2013-14 also pointed out that some of the projects were sanctioned more than 10 years ago and some of them were sanctioned even 20 years ago and are still in limbo and lying incomplete.

Material Modification (MM) refers to a substantial change in the scope of a sanctioned work or scheme which was not thought of at the initial stage but which is subsequently considered necessary. Independent works/schemes/ projects do not fall in the category of Material Modification as these would require separate sanction of the competent authority. This Audit focuses on the extent to which Railway Board complied with codal provisions and guidelines while sanctioning Material Modifications for already sanctioned projects.

Audit scrutiny revealed that 91 MMs were sanctioned against 38 original projects. None of these could be classified as MMs as these projects were on adjoining/ separate alignments. In fact in some cases, these MMs did not even touch a station on the original alignment. 31 MMs (34 per cent) were approved after completion of the original project. In fact in some cases the MMs were sanctioned as late as eight years (Northeast Frontier Railway) after completion of the original project. It was seen that 44 MM projects (48 per cent) were sanctioned as New Line projects against Gauge Conversion (GC), Track Doubling Project which is totally irregular as they fall under different Plan Head and require separate sanction as per laid down procedure for investment decision. The Zonal Railways generally failed to follow its own codes and manuals for approval of projects. In 37 MMs (41 per cent), the Rate of Return (ROR) of MMs were either not assessed or they were negative. Further, they failed to re-assess ROR for the entire project after including the MMs. It was seen that Detailed Estimate/ Final Location Survey had not been prepared/ carried out in 15 per cent of the MMs. Audit further noticed that 32 MM projects (ER-24 and SER-8) were declared as Special Railway projects during the year 2010-11 but in none of the projects land had been acquired (January 2014)

From the above it can be seen that Ministry of Railways flouted the procedures laid down for both formulation and approval of projects. Even preliminary procedures like conducting a Techno Economic Survey were not followed. In fact the standard procedure of taking approval of the Planning Commission before inclusion of a work in the Annual Works Programme was in the main also not followed. Further, the MoR has failed to priortise projects and is undertaking new

[124] Includes 12 Zonal Railways viz., NR, NWR, NER, NFR, ECR, ER, SER, SECR, ECoR, SR, SC, WR

projects. as MMs. The slow progress of works indicates the budgetary problems being faced by MoR and that the works sanctioned do not abide with National Plan priorities.

3.1.1 Introduction

Indian Railways (IR) draws up its development plans within the framework of the Five year Plans. Construction of New Lines (NL), Gauge Conversion (GC), Track Doubling and electrification of track constitute a major part of their Plan Outlay. A perusal of Planning Commission's Approach Paper to the Twelfth Plan reveals the emphasis on much faster expansion in transport infrastructure than seen in the past. This requires the Railways to expand its rail network rapidly.

The procedure laid down by the IR for approval of projects emphasizes the need for taking up only financially remunerative projects. Several Parliamentary Committees[125] have also in the past reiterated the need to take up only those new projects which are financially viable and do not lead to the spreading of Railway's scarce resources thinly across a large number of projects. The Twentieth Report of the Standing Committee on Railways on the Demands for Grants for the year 2013-14 highlighted that the sanctioning of new projects annually by the Ministry, much beyond the resources available, has resulted in increment of the throw-forward[126] of railway infrastructure projects. They also noticed that some of the projects were sanctioned more than 10 years ago and some of them were sanctioned even 20 years ago and are still in a limbo and lying incomplete. Despite this, it was seen that the Working Group Report for XII Plan-Railway Sector had estimated the throw forward for ongoing projects relating to New Lines, Gauge Conversion, Track Doubling and Electrification of tracks as ₹124250 crores as on April 2011.

As per Para 1110 of the Indian Railway code for the Engineering Department, Material Modification (MM) refers to a substantial change in the scope of a sanctioned work or scheme which was not thought of at the initial stage but which was subsequently considered necessary. The desired change/ modification should pertain strictly to the sanctioned work or scheme and not to the other adjoining alignments/ sections as these should be sanctioned separately as a new work. Independent works/schemes/ projects do not fall in the category of Material Modification as these would require separate sanction of the competent authority.

3.1.2 Earlier Audit Report

Audit Paragraph on Planning, Approval and Material Modification (MM) to ongoing projects appeared in the Report No. 9 of 2004 of Comptroller and Auditor General of India which highlighted that new projects were sanctioned as Material Modifications against original works. These projects were undertaken without preliminary survey/ investigations. Ministry of Railways (MoR) bypassed the approval of the Planning Commission/ Expanded Board[127]/ Cabinet Committee on

[125] The Ninth Report of the Standing Committee on Railways on the Demands for Grants for the year 2001-02, the Twentieth Report of the Standing Committee on Railways on the Demands for Grants for the year 2013-14

[126] Throw forward of railway infrastructure projects

[127] Expanded Board for Railways comprises of Chairman, Railway Board, Financial Commissioner (Railways), all members of the Railway Board, Secretary (Expenditure), Ministry of Finance, Secretary (Programme Implementation), Ministry of Statistics and Programme Implementation and Secretary, Planning Commission

Economic Affairs (CCEA)[128] by irregularly sanctioning and including independent projects as Material Modifications to the ongoing projects.

In the Action Taken Note vetted by audit in August 2013 through appending their observations, audit observed that Ministry of Railways (Railway Board) itself had decided (February 2001) that clearance of the Planning Commission, Expanded Board and Cabinet Committee on Economic Affairs (CCEA) may be obtained in cases, (i) where introduction of MM costs more than ₹ 50 crore or 10 *per cent* of the cost of project originally sanctioned, whichever is higher, (ii) where the cost of the works as originally sanctioned was less than ₹ 50 crore but as a result of MM, the original cost of the project exceeds ₹ 50 crore or more than 20 *per cent* of the cost of the project originally sanctioned, whichever is higher and (iii) if a number of MMs are carried out to a project and the combined value exceeds ₹ 50 crore or 10 *per cent* of the cost of project originally sanctioned, whichever is higher.

Ministry of Railways (Railway Board) also appended their comment to the Action Taken Note which was as under:-

1. Railway Board's decision of February 2001 is not applicable as the threshold cost of the projects requiring clearance of Planning Commission, Expanded Board and Cabinet Committee on Economic Affairs has undergone upward revision to ₹ 150 crores and further to ₹ 300 crores.
2. MMs were sanctioned when during course of execution of projects it was realised that some addition and alteration would be desirable with a view to enlarge the coverage to realise full benefit of the projects. As per practice, these MMs were approved by competent authority i.e. Ministry of Railways.
3. Subsequent to the Ministry of Finance's OM dated 1st April 2010, no instructions regarding approval of Material Modifications have been issued by the Ministry of Railways.

It is clear from the above that the approval of the MMs by the Expanded Board and CCEA with monetary limit of ₹ 50 crore and ₹ 100 crore and above as per Ministry of Railways OMs of February 2001 and January 2004 still exists.

3.1.3 Scope of Audit

The audit focuses on extent to which Railway Board complied with codal provisions and guidelines while sanctioning and implementing projects and covers the period from 2008-09 to 2012-13.

3.1.4 Audit Objectives

Audit examined whether the Material Modification included in a project is actually a MM or a new work introduced as a MM. The present audit was under taken with the following objectives –

(i) Whether works sanctioned as Material Modifications could be defined as such under the codal provisions of the Indian Railways;

(ii) Whether the above works were approved by the competent authority.

3.1.5 Audit Criteria

Audit adopted the following Criteria:-

[128] CCEA is one of the Standing Committees of the Cabinet Constituted by the Government of India

As per Para 1109, 1110 and 1113 of Indian Railways Code for the Engineering Department:

No material modification in a work or scheme as sanctioned should be permitted or undertaken without the prior approval of the authority, who sanctioned the estimate. In the case of estimates sanctioned by the Railway Board or higher authority, instances of what will be considered to be material modifications of a sanctioned project or work are given below.

The following may be taken as material modifications on lines under construction and open line works estimated to cost rupees one crore and over.

(a) Any change in the alignment likely to affect the facilities offered to the public in the neighbourhood or likely to increase or decrease the length of the line by over one kilometre.

(b) Introduction of any new station or omission of any station.

(c) Any alteration in the type or number of engines or vehicles provided in an estimate for rolling-stock.

(d) A change in the layout of a yard affecting the general method of working or increasing or reducing the number of trains that can be dealt with.

(e) Any departure from the standards of construction as prescribed in Chapter II or as accepted by the Railway Board in the Abstract Estimate or use of any second hand material, if it affects the speed of trains or the number of trains to be dealt with than contemplated originally.

(f) The introduction or omission of any work or facility involving a sum of ₹ 5 lakhs and over.

(g) Any modification of a sub-work provided for in the estimate of a sanctioned work involving an additional outlay on that sub-work of more than ₹ 5 lakhs.

(h) The introduction of the new sub-work not provided for in the estimate of a sanctioned work involving an outlay of more than ₹ 5 lakhs.

(i) Any alteration in the standards of interlocking.

If the introduction of a material modification becomes necessary in a project sanctioned by the Railway Board before the work is actually commenced, an amended abstract estimate should be prepared for the project and submitted for the approval of the Railway Board. When the introduction of a material modification in a project as sanctioned by the Railway Board or higher authority becomes necessary during the progress of the work, a revised abstract estimate should be submitted to the Railway Board, even when no excess in the amount of the sanctioned estimate is likely to result. No liability should be incurred on the modification, nor, if a saving is likely to be affected by its introduction, should the saving be utilised for any other purpose, until the proposed modification has received the approval of the Railway Board.

3.1.6 Methodology and Sample Selection

Audit Methodology included review of records relating to the works/ projects sanctioned as material modification as maintained by the Zonal Railways and Railway Board. List of works reviewed is given in **Annexure I**. Out of 42 ongoing works to which 108 MMs[129] were sanctioned, audit selected for review 38 ongoing works[130] of 12 Zonal Railways[131] for which 91 MMs were sanctioned and included in the Annual Works Programme of Indian Railways during the period 2008-09 to 2012-13. Status of the eight original works[132] included in Audit Report No. 9 of 2004 was also examined.

3.1.7 Procedure of Project Approval

All major investment proposals[133] such as New Lines, Gauge Conversion, Railway Electrification etc. before being listed in the Annual Works Programme of IR need approval of the Competent Authority. As per provisions of the Indian Railway Code for Engineering Department (Paragraph 203 E), the Zonal Railway is required to conduct a Techno Economic Survey (TEC) of the section and estimate its Rate of Return (ROR) and forward the same to the Railway Board for approval. This is in the form of a pre-investment decision and also examines the viability of a project. The benchmark ROR for establishing the viability of a project has been fixed as 14 *per cent*[134].

As per Ministry of Railways O.M. of January 2004, projects of Ministry of Railways costing less than ₹ 100 crore need concurrence of Planning Commission and approval of Minister of Railways. Projects costing ₹100 crore and above would be referred to CCEA for approval with the recommendations of the Expanded Board after appraisal by the Planning Commission.

Review by Audit revealed that out of 91 MMs selected for review, for 59 MMs (65 *per cent*) costing ₹ 100 crore and above necessary approval of the Cabinet Committee on Economic Affairs (CCEA) were not obtained.

After approval of these projects by the Competent Authority a Final Location Survey (FLS) is carried out. Based on this the Detailed Estimates are prepared and sanctioned. The actual work can commence only after approval of the Detailed Estimates by the Railway Board.

Any excess to the sanctioned estimates on account of general inflation, introduction of new items such as for Material Modification would require the revised estimates to be sanctioned by the authority that had sanctioned the original estimate.

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[129] ER-13 MMs, SER-1 MMs and NFR-3 MMs. 91 MMs (+) 17 MMs = 108 MMs (Total MMs out of 42 ongoing works)

[130] Out of 42 ongoing works (including 8 old works of Audit Report No. 9 of 2004), 38 works were selected (75 per cent of works selected for Eastern, South Eastern and Northeast Frontier Railways and for other Railways 100 per cent of the works were selected)

[131] In the rest of the 4 Zonal Railways no MM works were undertaken

[132] GC of Bankura-Rainagar, Doubling of Kalinarayanpur-Krishnanagar, NL of Deogarh-Sultanganj, NL of Ekhalakhi-Balurghat, GC of Rajkot-Veraval, Restoration of Fatuha-Islampur, GC of Kanpur-Kasganj-Mathura & Kasganj-Bareilly and GC of Mansi-Saharsa

[133] IR draws up its development plans within the framework of National Five Year Plans. Construction of New Line, Track Doubling, Gauge conversion, etc. form a part of the Indian Railways development plans and constitutes a substantial portion of their Plan outlay.

[134] As per Para 204 of Indian Railway Financial Code, volume-I

3.1.8 Audit findings

3.1.8.1 Irregular sanction of works as Material Modification

The Annual Works Programmes for the period 2008-09 to 2012-13 were reviewed. A test check by audit revealed that 91 MMs were listed separately against 38 of the existing works. Since a MM is part of the work, these are not normally listed separately. The results are tabulated in Table 3.1:

Table 3.1

Number/ Nature of each Material Modification work against each original work

Name of the Railway	No. / Nature of original work	No. /Nature of MM Work
Northern	1-DOUB	2-NL
North Western	2- GC	5 (4-GC, 1-NL)
North Eastern	2 (1-GC, 1-NL)	2 (1-GC, 1-NL)
Northeast Frontier	4 (3-GC, 1-NL)	9 (5-NL, 3-GC, 1-OTH)
East Central	2 (1-OTH, 1-GC)	10 (4-NL, 3-GC, 3-OTH)
Eastern	16 (5-NL, 9-DOUB, 1-GC, 1-OTH)	32 (28-NL, 2-GC, 1-OTH, 1-DOUB)
South Eastern	4 (1-GC, 3-NL)	14-NL
South East Central	1 – GC	1 - NL
East Coast	1-DOUB	2 (1-NL, 1-GC)
Western	2-GC	5 (3-GC, 2-NL)
South Central	1-NL	1-NL
Southern	2-GC	8 (6-NL, 2-OTH)
TOTAL	**38** (11-NL, 14-GC, 11-DOUB, 2-OTH)	**91** (65-NL, 17-GC, 1-DOUB, 8-OTH)

NL- New Line, **GC**- Gauge Conversion, **DOUB**- Track Doubling, **Others include**-New BG Rail Link, Conversion of MG Coaching Depot, Restoration of Dismantled line, Construction of new bridge, Construction of guide bund, Removal of cause ways, Construction of 3rd/ 4th line, Additional Facilities work, etc.

Examination of the above table reveals the following:

- 91 Material Modifications (MMs) were listed as separate works against 38 original works, even though the MMs are an integral part of a work and are not required to be listed separately. Further, these MMs did not originally appear in the Annual Works Programme[135] but were added subsequently.
- The maximum numbers of such MMs were sanctioned in Eastern Railway followed by South Eastern Railway, East Central, Northeast Frontier Railway, etc.
- It is seen that mostly New Line works were sanctioned as MMs against the original Gauge Conversion Works.

3.1.8.2 Audit examined in detail 91 MMs. The results are discussed in the following paragraphs.

[135] As per Railways Annual Works Programme – Works. Machinery and Rolling Stock Programme for Railways

3.1.8.2.1 Northern Railway

From Table 3.2 it is seen that in Northern Railway, two New Line (NL) projects were sanctioned as MMs against one Track Doubling project. The details are given below:

Table 3.2 - Track Doubling Project of Utratia-Sultanpur-Zafrabad

Present status of the main work	Nature/ Name of the MM work	Cost involved and present status of the MM
Track Doubling work was sanctioned in 2006-07. The Detailed Estimate was sanctioned in July 2006 at a cost of ₹369.90 crore with stipulated date of completion as 2013-14. As on January 2014 the physical progress was 31 *per cent*.	1.Akbarganj-Rae Bareli New Line (46.90 km)	Work sanctioned at an estimated cost of ₹295.67 crore in February 2011. Reconnaissance cum Engineering Survey (RET) was completed in February 2011[136] and estimated ROR as (-) 8.79 *per cent*. Detailed Estimate not sanctioned and the work had not yet started (January 2014).
	2.Sultanpur – Amethi New line (29.22 km)	The work was sanctioned at an estimated cost of ₹153.83 crore in February 2011. Preliminary cum Engineering Traffic survey (PET) completed in July 2010[137] and estimated the ROR as (-) 7.93 *per cent*. Detailed Estimate not sanctioned and the work had not yet started (January 2014).

(Source: Ministry of Railways File No.2006/W2/NR/DL/3, File No.2011/W-2/NR/WP/06 and Northern Railway's File No.101-W/86/W-SPL-estimate/Part-I and File No.101-W/86/W.Spl/Pt.II)

Scrutiny of records by Audit revealed the following:

- Both the above MMs were justified by Zonal Railway/ Railway Board on the ground that modifications in the alignment were likely to affect the facilities[138] and change the length of the line. From the schematic diagram below, it can clearly be seen that the Akbarganj-Rae Bareli and Sultanpur-Amethi projects were an off shoot from the original Track Doubling project of Utratia-Sultanpur-Zafrabad.

[136] The Akbarganj-Rae Bareli section was a part of the proposed Faizabad-Lalganj NL project which was surveyed (RET) in February 2011.

[137] Sultanpur-Amethi section was a part of Shahganj-Unchahar rail line project surveyed (PET) in July 2010.

[138] In view of continuous public representations for providing bare minimum rail connectivity in the area, NR has stated that immediate operational need and passenger requirement can be probably be served by providing connectivity between Akbarganj-Rae Bareli and Sultanpur-Amethi.

Fig. 3.1 - Track Doubling of project of Utratia-Sultanpur-Zafrabad

(Source: System Map of Northern Railway)

- Both the MMs sanctioned are NL projects and were sanctioned as MM to a Track Doubling project. This was totally irregular as they fall under different Plan Heads[139]. Further, inclusion of any new line project to a Track Doubling work[140] cannot be termed as a MM.
- It was seen that the Preliminary Engineering cum Traffic Survey (PET) of both the MMs were taken up as part of two different new line projects. The estimated RORs of both the MMs were (-) 8.79 *per cent* and (-) 7.93 *per cent* and were non viable.
- Further financial reappraisal of the original projects was not done again duly taking into account the cost of MM.
- Sanction of these MMs led to an additional commitment of ₹449.50 crore [₹295.67 crore for Akbarganj-Rae Bareli and ₹ 153.83 crore for Sultanpur-Amethi]. With the approval of these two New lines, the cost of the ongoing Track Doubling project increased from ₹369.90 crore to ₹819.40 crore (₹369.90 crore + ₹295.67 crore + ₹153.83 crore) i.e. a percentage increase of 122 *per cent*.
- Review of files by audit at the Zonal Headquarters and Railway Board revealed that the Akbarganj-Rae Bareli and Sultanpur-Amethi NL projects were proposed for approval as MM of Utratia-Sultanpur-Zafrabad line by General Manager, Northern Railway and also approved within five days bypassing the prescribed system of project approval laid down in their own codes and manuals and the system laid down by the Ministry of Finance i.e. approval of the Planning Commission, Expanded Board of Railways and the CCEA.

[139] New Line- Plan Head 11, Gauge conversion – Plan Head 14

[140] As per APPENDIX II of Indian Railway Financial Code, Volume-II, for the purpose of link with the Accounts of the Central Government the Plan Heads will form the Minor Heads of Railway Capital under the Major Head.

3.1.8.2.2 North Western Railway

From Table 3.3 it is seen that in North Western Railway, five MMs were sanctioned against two GC works. The details are given below:

***Table 3.3* - Udaipur-Chittaurgarh-Ajmer GC work**

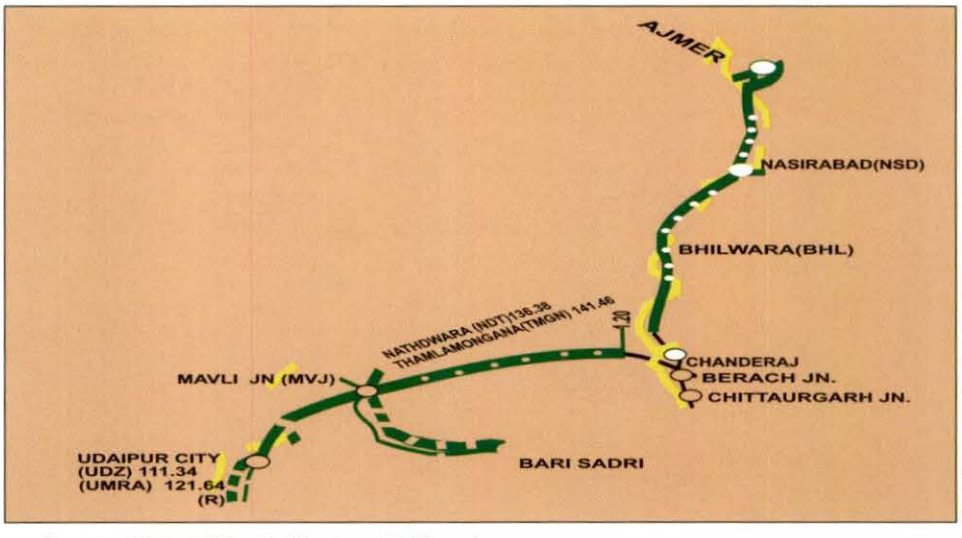
Present status of the main work	Nature/ Name of the MM work	Cost involved and present status of the MM
(a) Udaipur-Chittaurgarh-Ajmer GC work The work was sanctioned in 1996-97 at a cost of ₹ 433.39 crore. The work was executed in two phases. The Chittaurgarh-Udaipur City section was completed and opened in August 2005 and the Ajmer-Chittaurgarh section was opened in July 2007.	1.Udaipur City-Umra GC work (10.50 Km) 2.Mavli-Nathdwara GC work (15.27 Km) 3.Mavli-Badisadri GC work (82.01 km) 4. Nathdwara – New Nathdwara New Line (10.82 km)	1. Sanctioned at an estimated cost of ₹21.79 crore in August 2002 without assessing the ROR. However, the work was dropped by Railway Board in December 2004. This was commented in Paragraph No.3.1.4 of the Audit Report No.6 of 2006. 2.Sanctioned at an estimated cost of ₹31.94 crore in November 2008 (15 months after completion of the main project) without assessing the ROR. The Detailed Estimate was sanctioned in November 2008. The line laid at a cost of ₹ 29.70 crore and was opened for traffic in September 2013 after two and half years of its completion in March 2011. 3.The project approved in February 2013 at an estimated cost of ₹290.66 crore despite an assessed ROR of (-) 5.24 *per cent*. The project was approved in February 2013 (5 years and 8 months after completion of the main project in July 2007). The detailed estimates are however yet to be sanctioned (March 2014). 4.The project was approved hurriedly within two days by RB in June 2013 at an estimated cost of ₹107.19 crore without assessing the ROR. The project was approved in June 2013 (70 months after completion of the main project). The Detailed Estimate is yet to be sanctioned and work has not yet started (January 2014) Due to addition of the MMs, the cost of the original project has increased from ₹433.39 crore to ₹884.97 crore, an increase of 104 *per cent*. Although, the original project was completed and opened for traffic in July 2007, the project as a whole remains incomplete even after six years.
(b) Rewari-Sadulpur GC work The project was sanctioned in September 2001 at a cost of ₹ 100 crore. It was completed and opened for traffic in 2008-09 at a cost of ₹ 419.32 crore	Sadulpur-Hissar GC work (70 km)	The Ministry approved the work as a MM to the Rewari-Sadulpur section in February 2001. Combined Detailed Estimate of Rewari-Sadulpur-Hissar was sanctioned at a cost of ₹364.19 crore in September 2006 without assessing ROR. The work was sanctioned in February 2001 prior to sanctioning of the original work. The project was completed and opened for traffic in 2008-09 at a cost of ₹419.32 crore. Due to addition of the MM, the cost of the original project has increased from ₹100 crore to ₹ 419.32 crore, an increase of 319 *per cent*.

(Source: Ministry of Railways File No.2003/W2/GC/NWR/1, File No.93/W-II/GC/W/T/AU-UD/2, File No.2009/W-I/NWR/GC/1 Survey and North Western Railways File No.T/IE/SDLP-HSR/09, File No.496T/GC/RE-SDLP-HSR/2008/TGP, File No.NWR/S&C/UDZ-HMT/335/1 and File No.CAO/JP/W/Misc/MVJ-BI)

Scrutiny of records by Audit revealed the following:

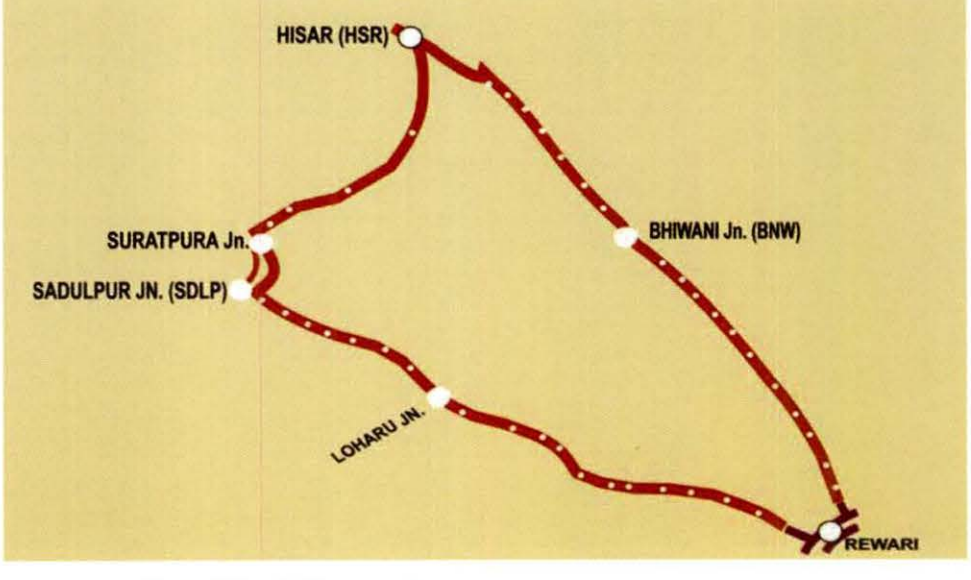
- As can be seen from the schematic diagrams below, the above MMs were an offshoot from the original Gauge Conversion projects as they were separate lines not falling in the alignment of the original project. Hence they cannot be classified as MMs. Further a NL project (Nathdwara-New Nathdwara) was sanctioned as MM to a GC project (Ajmer- Chittaurgarh-Udaipur GC) which was irregular as the two fall under different Plan Heads[141].

Fig. 3.2 - (a) Udaipur-Chittaurgarh-Ajmer GC work



(Source: System Map of North Western Railway)

Fig.3.3 - (b) Rewari-Sadulpur GC work



(Source: System Map of North Western Railway)

- Three[142] out of the four MMs were sanctioned after completion of the main project.

[141] New Line-Plan Head 11, Gauge Conversion-Plan Head 14
[142] Mavli-Nathdwara, Mavli-Badisadri and Nathdwara-New Nathdwara

- In four MM projects, the ROR was not assessed. In the remaining MM project though the ROR was assessed it was negative. Financial reappraisal of the original projects was not done again duly taking into account the cost of MM.
- The above procedure bypassed the prescribed system of project approval laid down in their own codes and manuals and generally of the procedure laid down by the Ministry of Finance[143].

3.1.8.2.3 North Eastern Railway

From Table 3.4 it is seen that two MMs (one GC and one NL) were sanctioned against two main works in North Eastern Railway. The details are given below:

Table 3.4

Present status of the main work	Nature/ Name of the MM work	Cost involved and present status of the MM
(a) Kanpur-Kasganj-Mathura and Kasganj-Bareilly GC project It has been commented in Report No.9 of 2004 (Railways) that although the work was rejected by the Expanded Board in 1996, yet, RB got CCEA approval in February 1997. The work was sanctioned at a cost of ₹395 crore. The project was opened for traffic except the section from Kasganj to Bareilly. As on February 2014 overall progress of this section was 87 *per cent.*	Bareilly-Lalkuan GC work (83.85 km)	A comment was made in the Audit Report No.9 of 2004 that despite Railway Board's decision of April 1998 not to pursue the project in view of its un-remunerativeness, it was sanctioned in February 2003 at a cost of ₹658.11 crore. The work was completed and opened for traffic in January 2013. Due to inclusion of MM, the total cost of the original project increased from ₹395 crore to ₹ 1053.11 crore, an increase of 167 *per cent.*
(b) Maharajganj-Masrakh New Line project The work was sanctioned in 2003-04 at a cost of ₹134.42 crore. As on February 2014, the work has been completed to the extent of 27 *per cent.*	Masrakh-Rewa Ghat New Line (30 km)	The Planning Directorate shelved the project in February 2007 due to low returns and no operational requirement. The proposal was reconsidered in October 2007. While reconsidering the project, the Finance Directorate opined that work of this magnitude and scope does not qualify to be considered as MM and recommended shelving of the project. Subsequently, in February 2008, the project was approved at ₹94 crore. Due to inclusion of MM, the total cost of the original project increased from ₹134.42 crore to ₹228.42 crore i.e. an increase of 70 *per cent.* The target date for completion of the original work as well as the MM work has not been fixed (March 2013).

(Source: Ministry of Railways File No.2007/W-I/NE/NL/81 and North Eastern Railway's File No.W/Con/98/306/W-I, No.W/Con/348/Masrakh-Rewa Ghat/Survey and File No.W/Con/348/154/Survey, No.W/Con/362/01/W-1)

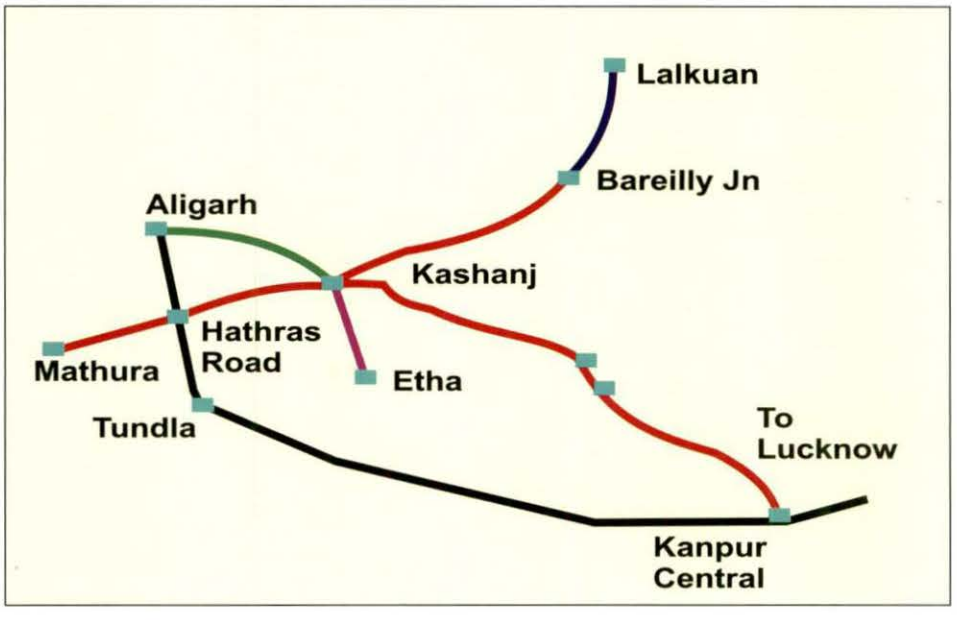
Scrutiny of records by Audit revealed the following:

- As can be seen from the schematic diagram below, the Bareilly-Lalkuan GC was an offshoot from the original GC project and was on a separate line not

[143] Ministry of Finance O.M. No.1(26)/E.Ii(A)/02, dated 21.12.2002

falling in the alignment of the original project and cannot be classified as a MM of the original project.

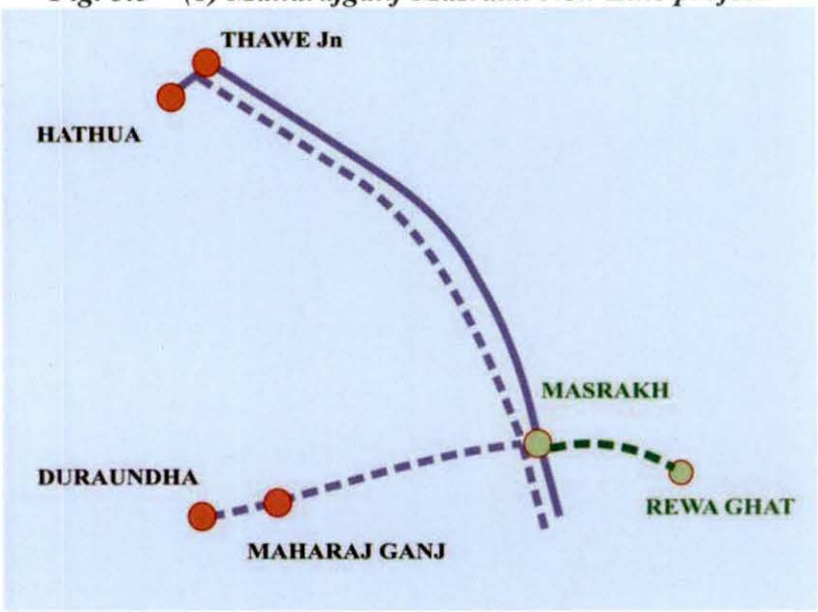
Fig. 3.4 – (a) Kanpur-Kasganj-Mathura and Kasganj-Bareilly GC project



(Source: System Map of North Eastern Railway)

- Bareilly-Lalkuan project was initially referred to the Planning Commission and the Expanded Board as a separate project. After rejection by these bodies it was sanctioned by the Railway Minister as a MM to the Kanpur-Kasganj-Mathura and Kasganj-Bareilly GC project.
- This is a unique case where the MM of Bareilly-Lalkuan has been completed, whereas the original project of GC of Kanpur-Kasganj-Mathura and Kasganj-Bareilly has been completed upto Kasganj only. Thus the Bareilly-Lalkuan line stands isolated creating operational difficulties for the Railways. This deprived a direct and shorter connectivity from Mathura and beyond to Western and Central Railways.
- The schematic diagram below of Masrakh-Rewa Ghat New Line (NL) project revealed that the Masrakh-Rewa Ghat NL was an offshoot from the original NL project of Maharaj Ganj – Masrakh and was a separate line. Hence, it cannot be classified as MM of the original project.

Fig. 3.5 – (b) Maharajganj-Masrakh New Line project



(Source: System Map of North Eastern Railway)

- The MM of Masrakh-Rewa Ghat was justified on socio-economic grounds. But the work could not be started (March 2013) even after six years of its sanction.
- Financial reappraisal of the original projects was not done again duly taking into account the cost of MM sanctioned.
- The above procedure by passed the prescribed system of project approval laid down in their own codes and manuals and generally of the procedure laid down by the Ministry of Finance.

3.1.8.2.4 Northeast Frontier Railway

From Table 3.5 it is seen that in Northeast Frontier Railway, nine MMs (five NL, three GC and one other) were sanctioned against four main works. These are discussed below:

Table 3.5

Present status of the main work	Nature/ Name of the MM work	Cost involved and present status of the work
(a) Eklakhi-Balurghat New Line The Detailed Estimate of the work was sanctioned in 1983-84 at a cost of ₹36.38 crore. The section was opened for traffic in December 2004.	Raiganj-Itahar New Line (21.82 km)	The MM was sanctioned at an estimated cost of ₹129.30 crore in May 2011, after seven years of completion of the original work. ROR of the project was assessed as (-) 9.45 *per cent*, Final Location Survey (FLS) of this work was not completed (January 2014).
	Itahar-Buniadpur New Line (39 km)	The MM was sanctioned at an estimated cost of ₹287.95 crore in September 2012, after eight years of completion of the original work. ROR of the project was not assessed. FLS of this work was not completed (January 2014). Due to inclusion of the above MMs, the total cost of the original project increased from ₹36.38 crore to ₹703.17 crore i.e. an increase of 1932 *per cent*.

(b) Gauge Conversion of Lumding-Silchar including Migrendisa-Dittockchera extension from Badarpur-Baraigram The work was sanctioned in 1996-97 at a cost of ₹648 crore. As on January 2014 the work is in progress.	Baraigram-Dullabcherra GC (29.4 km) Karimganj-Maishashan GC (10.3 km)	The MM was sanctioned at an estimated cost of ₹103.84 crore in 2011-12. ROR of the project was (-) 4.90 *per cent*. Land acquisition is in progress (January 2014). The MM was sanctioned at an estimated cost of ₹55 crore in 2011-12. ROR of the project was estimated as (-) 228.14 *per cent*. Land acquisition is in progress (January 2014). Due to inclusion of the above MMs the total cost of the original project increased from ₹648 crore to ₹4027.93 crore i.e. an increase of 521.59 *per cent*.
(c) Gauge Conversion of Katihar-Jogbani including Katihar-Barsoi-Radhikapur The work was sanctioned in 2000-01 at a cost of ₹402.98 crore. The section was opened for traffic in three phases between February 2006 and June 2008.	Katihar-Teznarayanpur GC (34 km) Raiganj-Dalkhola NL (43.43 km) Conversion of MG coaching Depot at Katihar	The MM was sanctioned at an estimated cost of ₹65.08 crore in 2007-08. ROR of the project was estimated as (-) 9.13 *per cent*. Work was completed and the section was opened for traffic in two phases in October 2011 and March 2013 . The MM was sanctioned at an estimated cost of ₹291.53 crore in May 2011 after three years of completion of the original project. ROR was not assessed. The work was at a very initial stage (January 2014). The MM was sanctioned at an estimated cost of ₹10.99 crore in 2006-07. The work was completed and handed over to Open Line in December 2009. Due to inclusion of the above MM,s the total cost of the original project increased from ₹402.98 crore to ₹1015.84 crore i.e. an increase of 252.11 *per cent*.
(d) Gauge Conversion of New Jalpaiguri-Siliguri Jn-New Bongaigaon along with Branch line The work was sanctioned in 1999-2000 at a cost of ₹123.88. The section was opened for traffic in December 2003.	Chalsa-Naxal New Line (16 km) Rajabhatkhowa-Jainti New Line (15.13 km)	The MM was sanctioned at an estimated cost of ₹292.93 crore in 2011-12 after completion of the original work in December 2003. The ROR of the project was (-) 9.37 *per cent*. Land acquisition has been completed (January 2014). The MM was sanctioned at an estimated cost of ₹180.16 crore in 2012-13 after completion of the original work in December 2003. ROR was not assessed. FLS as well as Preliminary Engineering cum Traffic (PET) survey has not yet been completed (January 2014). Due to inclusion of the above MM,s the total cost of the original project increased from ₹123.88 crore to ₹1489.06 crore i.e. an increase of 1202 *per cent*.

(Source: Ministry of Railways File No.2000/W-1/GC/NF/(KIR-JBN), File No.97/WLGC/NF/1(DE)/C-N, File No.2011/W1/NF/WP 11-12/Raiganj-Dalkhola (MM), File No.2011/W1/NF/WAP11-12/Karimganj-Maishashan (MM) and Northeast Frontier Railway's File No W/98/CON/Rajabhatkhuwa-Jainti, GM/CON/MCDO of March 2013, File No. W/155/CON/NJP-NBQ)

Scrutiny of records by Audit revealed the following:

- The above MMs were an off shoot from the original project and cannot be classified as MMs.

- Three NL project (Raiganj-Dalkhola, Chalsa-Baxal and Rajabhatkhowa-Jainti) were sanctioned as MM to a GC project which was irregular as the two fall under different plan heads[144]. Similarly, one traffic facility work (Conversion of MG coaching Depot at Katihar) was also sanctioned as MM to a GC project which was irregular as they fall under different plan heads[145].
- RORs of the projects were either negative or not assessed at all. In one case the ROR was assessed as (-) 228.14 *per cent*[146].
- Financial reappraisal of the original projects was not done again duly taking into account the cost of the MM.
- The above procedure bypassed the prescribed system of project approval laid down in their own codes and manuals and generally of the procedure laid down by the Ministry of Finance.

3.1.8.2.5 East Central Railway

From Table 3.6 it is seen that in East Central Railway, ten MMs (four NL, three GC and three other) were sanctioned against two main works. The details are given below:

Table 3.6

Present status of the main work	Nature/ Name of the MM work	Cost involved and present status of the work
(a) Fatuha-Islampur Restoration of dismantled line The work was sanctioned in 1998-99 at a cost of ₹78.04 crore The section was opened for traffic in 2003.	Daniawan-Biharsharif New Line (38.28 km)	The MM was sanctioned at an estimated cost of ₹104.79 crore in 2001-02. The cumulative net earnings of the project in 30 years was estimated as (-)₹45.38. crore and the initial investment for this project is estimated to ₹ 12.84 crore without assessing the ROR. The overall progress was 81 *per cent* as of December 2013.
	Biharsharif – Barbigha New Line (26 km)	The MM was sanctioned at an estimated cost of ₹103.86 crore in 2001-02. ROR was not assessed. The overall progress was 40 *per cent* as of December 2013.
	Barbigha – Sheikhpura New Line (26 km) and Neora/Danapur – Daniawan New Line (36 km)	Both the MMs were sanctioned in 2001-02. RB sanctioned the combined Detailed Estimate costing ₹516.41 crore in January 2013. ROR was not assessed. These works are now being carried out by Rail Vikas Nigam Limited (RVNL). The MMs were sanctioned in the year 2001-02 and even after 12 years, they had not been started. The work of land acquisition, planning and designing is in progress (October 2013). Due to inclusion of the above MM,s the total cost of the original project increased from ₹78.04 crore to ₹803.10 crore i.e. an increase of 929 *per cent*.
(b) Mansi-Saharsa GC work The work was sanctioned in 1996-97 at a cost of ₹43.39 crore which was revised to ₹111.86 crore in 2004.	Saharsa-Dharam Madhepura GC	The MM was sanctioned at an estimated cost of ₹40.19 crore in 2003-04 without assessing the ROR. The work was completed in June 2010.
	Dharma Madhepura-Purnia GC	The MM was sanctioned at an estimated cost of ₹129.75 crore in 2003-04 without assessing ROR (March 2013). As on February 2014 the work has been completed to the extent of 80 *per cent*.

[144] NL–Plan Head 11 and GC-Plan Head 14.
[145] Traffic facility work–Plan Head 16 and GC-Plan Head 14
[146] Karimganj-Maishashan GC- ROR (-) 228.14 per cent

The work was completed in 2005.	Construction of new Bridge No.53 and allied work in Mansi-Badala Ghat section.	The MM was sanctioned at an estimated cost of ₹4.27 crore in 2004-05. The work was completed (2005).
	Banmakhi-Bihariganj GC.	The project was sanctioned in 2005-06 at an estimated cost of ₹36.80 crore without assessing ROR. Target date of completion has not been fixed (February 2014).
	Construction of guide bund of Bridge No.45,50,52 and 53.	The MM was sanctioned at an estimated cost of ₹8.16 crore in 2006-07 without assessing. The work was not completed due to shortage of funds (February 2014).
	Removal of cause ways between Saharsa and Purnia.	The MM was sanctioned at an estimated cost of ₹2.39 crore in 2007-08 without assessing ROR. The work was not completed due to shortage of funds (February 2014). Due to inclusion of the above MM,s the total cost of the original project increased from ₹111.86 crore to ₹803.10 crore i.e. an increase of 198 *per cent*.

(Source; Ministry of Railways letter No.97/W2/SE/GC/SY/14 and File No.2010/W-2/SECR/SY/37/Pt.I)

Scrutiny of records by Audit revealed the following:

- The above MMs do not fall on the alignment of the original project and were an off shoot from it and cannot be classified as MMs. In fact four NL projects were sanctioned as MM to the Restoration of a dismantled line project, which is totally irregular. These works fall under different Plan heads[147] respectively and hence the MMs cannot be a part of the original project.
- Out of the above ten MMs, in respect of nine MMs, ROR was not assessed; in one MM, the ROR assessed was negative.
- Financial reappraisal of the original projects was not done again duly taking into account the cost of MM.
- The above procedure bypassed the prescribed system of project approval laid down in their own codes and manuals and generally of the procedure laid down by the Ministry of Finance.

3.1.8.2.6 Eastern and South Eastern Railways

Eastern and South Eastern Railways are headquartered in Kolkata and hence dealt with together. The maximum numbers of MMs out of the 91 selected for the review by Audit were approved in these two Zones; thirty two MMs were approved in Eastern Railway and fourteen in South Eastern Railway. The list of MMs and the main work against which they have been sanctioned is given at ***Appendix I***.

Audit scrutiny of records revealed the following:

[147] New Line-Plan Head 11, Restoration of dismantled lines-Plan Head 13

(i) Eastern Railway

- In Eastern Railway 32 MM projects (28 NL, 2-GC, 1-Other and 1-Track Doubling) were sanctioned (2001 to 2013) against 16 main works (5-NL, 9-Track Doubling, 1-GC and 1-Other).
- The MMs were a distinct off shoot from the original project and only touched a station on the original project and were hence on a separate alignment. Further, in two cases these MMs did not even touch any station on the originally sanctioned projects. Thus they cannot be classified as MMs. In addition, against nine original Track Doubling projects, 14 New Line projects and two Gauge Conversion works were sanctioned as MMs which is totally irregular as they fall under different Plan heads[148]. Five original projects were completed between 2006 and 2010, however their respective MMs were sanctioned almost five to six years after completion of the original work[149]. Due to addition of 32 MMs against 16 original works, the estimated cost of the works increased from ₹2613.92 crore to ₹8415 crore; an increase of 322 *per cent*.
- 27 of the 32 MMs were sanctioned in the period 2009-10 to 2011-12. Of these three MMs were directly announced in the Railway Budget itself. It was further noticed that 18 MMs proposals were sent to Railway Board in January 2011 and February 2011 and were included in the Budget for the year 2011-12 (details are given in ***Appendix I***).
- Eastern Railway Administration assessed a negative ROR in 20 MMs approved. In the remaining 12 cases, ROR had not been assessed at all (details are given in Appendix II).
- Financial reappraisal of the original projects was not done again duly taking into account the cost of the MMs.
- Audit noted that the Detailed Estimates had been sanctioned for 10 MMs, where no Final Location Survey had been conducted. In respect of 20 MMs no details are available. It was further seen that Detailed Estimate had yet been sanctioned for the remaining 2 MMs (details are given in ***Appendix I***).
- Out of 32 MMs, estimates in respect of 17 MMs[150] were more than that of the original work.
- 24 MM projects were declared as Special Railway Projects. However, land acquisition has not been completed in any project (January 2014).

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[148] Track Doubling-Plan Head 15, New Line-Plan Head 11, Gauge Conversion-Plan Head 14, Other work (Traffic facilities-yard remodelling and others)-Plan Head16

[149] Main work of Lakshmikantapur-Namkhana sanctioned in 1987-88 and completed in 2006, however, its MMs were sanctioned between 2009-10 to 2011-12, Main work of Chandpara-Bongaon sanctioned in 2003-04 and completed in 2012, however, its MMs were sanctioned between 2009-10 to 2011-12, Main work of Chinpai-Sainthia sanctioned in 2005-06 and completed in 2010, however, its MMs were sanctioned between 2009-10 and 2010-11, Main work of Sonarpur-Ghutiarishariff sanctioned in 2000-01 and completed in 2006, however, its MM was sanctioned in 2011-12, Main work of New Alipur-Akra sanctioned in 1996-97 and completed in 2004, however, its MMs were sanctioned between 2009-10 to 2011-12

[150] Chandranar-Bakkhali NL, Bongaon-chandabazar NL, Bongaon-Poramaheshtala NL, Chandabazar-Bagadh NL, Prantik-suri NL, Chowrigacha-Sainthia NL, Katwa-Bazarsau trak doubling, Katwa-Manteswar NL, Negum-Mangalkot NL, Kalikapur-Minakhan NL, Ahmedpur-Katwa GC, Budge Budge-Pujali NL, Pujali-Uluberia NL, Pujali-Bakrahat NL, Joynagar-Raidighai NL, Joynagar-Durgapur NL and Krishnanagar city-Charatala NL

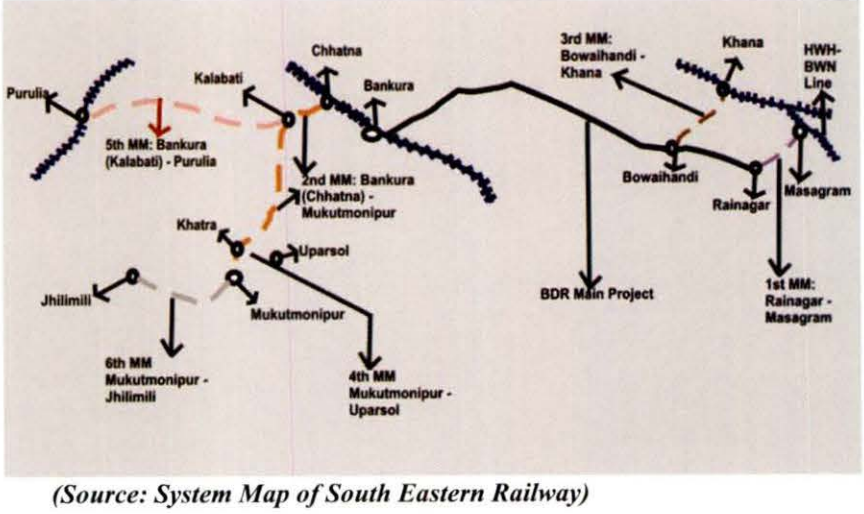
- The above procedure bypassed the prescribed system of project approval laid down in their own codes and manuals and generally of the procedure laid down by the Ministry of Finance.

(ii) South Eastern Railway

- In South Eastern Railway, 14 NL projects were sanctioned (2002-2012) as MM against 4 main works (1-GC and 3-NL) (Appendix I). All the 14 works were sanctioned as MM against four main works were on adjoining/ separate alignments and hence cannot be classified as MMs. Further, in six cases these MMs did not even touch any station on the originally sanctioned projects. Two original projects were completed between 2004 and 2008, however their respective MMs were sanctioned almost five to six years after completion of the original work.[151]

- Six New Line projects were sanctioned as MM against one Gauge Conversion main works which is totally irregular as they fall under different Plan heads and require separate sanction as per the laid down procedure for investment decisions. Such projects cannot be termed and approved as Material Modifications. Due to addition of 14 MM projects to the four original works, the estimated cost of the work increased from ₹912.82 crore to ₹3086.54 crore, an increase of 238 *per cent*.

Fig 3.6 - BDR Gauge Conversion Project with six MMs



(Source: System Map of South Eastern Railway)

- Nine of the 14 MMs were sanctioned in the period 2009-10 to 2011-12. 13 of the 14 MMs were announced in the respective Railway Budget. Further, only one MM was proposed by the SER (details are given in Appendix III).

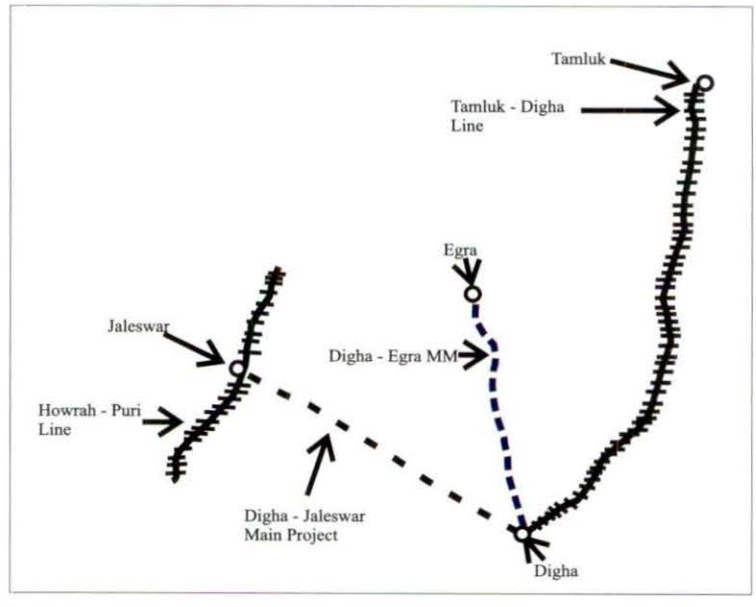
- Out of 14 MMs sanctioned, no Techno Economic Survey was conducted for six MMs (January 2014). In two MMs, Final Location survey had not been carried out. In seven MMs a negative ROR was assessed. In six cases, ROR had not been assessed at all. In only one MM project (Amta-Bagnan-ROR-19.69 *per*

[151] Main work of Bankura-Damodar river valley sanctioned in 1998-99 and completed in three phases between 2005 and 2008, however, its MMs were sanctioned between 2011-2012, Main work of Tamluk-Digha sanctioned in 1984-85 and completed in two phases between 2003 and 2004, however, its MMs were sanctioned between 2009 to 2011.

cent), the ROR assessed was more than the prescribed benchmark of 14 *per cent* (details are given in Appendix III).

- Financial reappraisal of the original projects was not done again duly taking into account the cost of the MMs.
- Detailed Estimate have been sanctioned by the Ministry of Railways (Railway Board) in all the 14 MMs.
- In respect of Mukutmunipur-Jhilmilli MM project, it was observed that the detailed estimate of the work was prepared and sent by the South Eastern Railway Administration on 23 February 2012, and was approved by the Minister of Railways within 12 days i.e. 6 March 2012. Out of the 14 MMs, for eight MMs costing ₹100 crore and above[152], no documents in support of any approval by the Expanded Board/ Planning Commission have been furnished by SER.
- Detailed estimate in respect of one MM (Digha-Egra)[153] was approved more than one year before approval of the estimates of the main project (Digha-Jaleswar). Further, approved estimated cost in respect of six MMs[154] were more than that of estimated cost of the original work.

Fig. 3.7 - Digha – Jaleswar New Line with MM of Digha – Egra



(Source: System Map of South Eastern Railway)

- No specific target was fixed for 13 out of 14 projects, In one project, where the target date was set, the project was completed after a delay of 52 months.

[152] Mukutmonipur-Uparsol, Bankura (Kalabati)-Purulia, Mukutmonipur-Jhilmili, Amta-Bagnan, Deshpran-Nandigram, Kanthi-Egra, Nandakumar-Balaipanda and Digha-Egra

[153] Detailed Estimate of Main work-Digha- Jaleswar NL was approved in July 2012, while the Detailed Estimate of MM work-Digha-Egra was approved in May 2011

[154] Mukutmonipur-Uparsol, Bankura-Purulia, Mukutmonipur-Jhilimili, Amta-Bagnan, Champadanga-Tarakeswar and Janghipara-Furfura Sharif

- Out of 13 projects, where no target were fixed, in respect of seven project conditional target date were envisaged, i.e. a tentative date after availability of land.
- Eight (considering Amta-Bagnan and Champadanga-Tarakeswar as separate projects) MM projects were declared as Special Railway Projects. However, land acquisition has not been completed in any project (January 2014).
- The above procedure bypassed the prescribed system of project approval laid down in their own codes and manuals and generally of the procedure laid down by the Ministry of Finance.

There was thus acceleration in the sanction of MMs especially in Eastern and South Eastern Railways during the period 2009-10 to 2011-12. A total of 36 new projects were sanctioned as MMs out of a total of 46 MMs during this period. Apart from sanctioning New Projects as MM of projects which are already completed a number of projects had not even been proposed for approval by the concerned Zone. Audit further noted that a total of 25 MMs were declared Special Railway projects[155]. This empowered the Railway Administration to acquire land in a time bound manner. However, in none of these cases was land acquired. It was also seen that physical progress in most of these MMs approved was minimal.

3.1.8.2.7 South East Central Railway

From Table 3.7 it is seen that in South East Central Railway, one MM (NL) was sanctioned against one main GC work. The details are given below:

Table 3.7 - Jabalpur-Gondia Gauge Conversion (285.45 km)

Present status of the main work	Nature/ Name of the MM work	Cost involved and present status of the work
The work was sanctioned in September 2010 at an estimated cost of ₹1037.90 crore. As of February 2014, the work has been completed to the extent of 69 *per cent*.	Katangi-Tirodi New Line (15.36 km)	The Detailed Estimate was sanctioned at a cost of ₹119.64 crore in June 2011 with ROR of (-) 1.54 *per cent*. Physical progress is minimal as Land acquisition is under process (February 2014). Due to inclusion of the above MM, the total cost of the original project increased from ₹1037.90 crore to ₹1157.54 crore i.e. an increase of 12 *per cent*.

(Source; Ministry of Railways letter No.97/W2/SE/GC/SY/14 and File No.2010/W-2/SECR/SY/37/Pt.I)

Scrutiny of records by Audit revealed the following:

- The MM was an offshoot from the original Gauge Conversion project and cannot be classified as a MM.
- The MM was sanctioned as a NL to a GC work which was irregular as they fall under different Plan Heads[156]. Inclusion of any new line to a gauge conversion work or vice-versa which are independent projects requiring

[155] In other Zones no project was declared a Special Railway project
[156] NL-Plan Head 11, GC- Plan Head 14

separate sanction as per the laid down procedure for investment. Such projects cannot be termed and approved as Material Modification.

- Financial reappraisal of the original projects was not done again duly taking into account the cost of MM.
- The above procedure bypassed the prescribed system of project approval laid down in their own codes and manuals and generally of the procedure laid down by the Ministry of Finance.

3.1.8.2.8 East Coast Railway

From Table 3.8 it is seen that in East Coast Railway[157], two MMs (1-GC, 1-NL) were sanctioned against one main work. These are discussed below:

Table 3.8 - Raipur-Titlagarh doubling work (203 km)

Present status of the main work	Nature/ Name of the MM work	Cost involved and present status of the work
The Detailed Estimate of the work was sanctioned in June 2010 at a cost of ₹758.10. As of February 2014, only 7 *per cent* of the physical progress of the work has been achieved.	Mandir Hasaud-New Raipur New Line (20 km) GC of Kendri-Dhamtari including Abhanpur – Rajim (67.20 km)	The Detailed Estimate was sanctioned at a cost of ₹100 crore in 2012-13 without assessing the ROR. FLS was completed but there is no physical progress (February 2014). The MM was sanctioned at an estimated cost of ₹283.85 crore in 2011-12 with ROR of 14.38 *per cent*. The Detailed Estimate not sanctioned. FLS was completed but there is no physical progress (February 2014). Both the above projects were approved by the Railway Board without obtaining the approval/ appraisal of the Planning Commission/ Expanded Board. Due to addition of the above MMs to the original work, the estimated cost of the work increased from ₹758.10 crore to ₹1141.95 crore, an increase of 51 *per cent*.

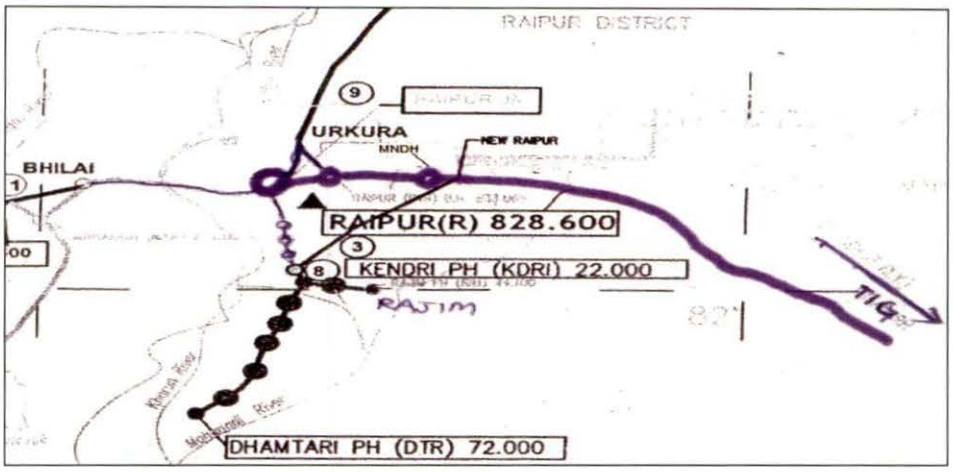
(Source: PCDOs of CON/BBS, RVNL and CON/SECR)

Scrutiny of records by Audit revealed the following:

- As can be seen from the schematic diagram below, both the MMs were an off shoot from the original Gauge Conversion project and cannot be classified as MMs.

[157] Original work is under the jurisdiction of ECOR and executed by RVNL. The MM works were in the jurisdiction of SECR.

Fig. 3.8 - Raipur-Titlagarh doubling work



(Source: System Map of East Coast Railway)

- The MMs were sanctioned as a New Line (Plan Head 11) and Gauge conversion (Plan Head 14) against Track Doubling (Plan Head 15). Inclusion of any new line/ gauge conversion to a Track Doubling work or vice-versa which are independent projects requiring separate sanction as per the laid down procedure such projects cannot be approved as Material Modification.
- The original track doubling work is being executed by Rail Vikas Nigam Limited (RVNL) through Asian Development Bank (ADB) loan while the MM works are being executed by South East Central Railway Administration.
- In both the above MMs, the FLS work was completed but there is no physical progress (February 2014).
- Financial reappraisal of the original projects was not done again duly taking into account the cost of MM.
- The above procedure by passed the prescribed system of project approval laid down in their own codes and manuals and generally of the procedure laid down by the Ministry of Finance.

3.1.8.2.9 Western Railway

From Table 3.9 it is seen that in Western Railway, five MMs (3-GC and 2-NL) were sanctioned against two main works. These are discussed below:

Table 3.9

Present status of the main work	Nature/ Name of the MM work	Cost involved and present status of the work
(a) Rajkot-Veraval GC project The work of GC was sanctioned in 1994-95 at a cost of ₹100	Wanasjaliya to Jetalsar Gauge conversion	The work was sanctioned at an estimated cost of ₹98 crore in October 2002. Detailed Estimate not sanctioned. It was completed in March 2011.

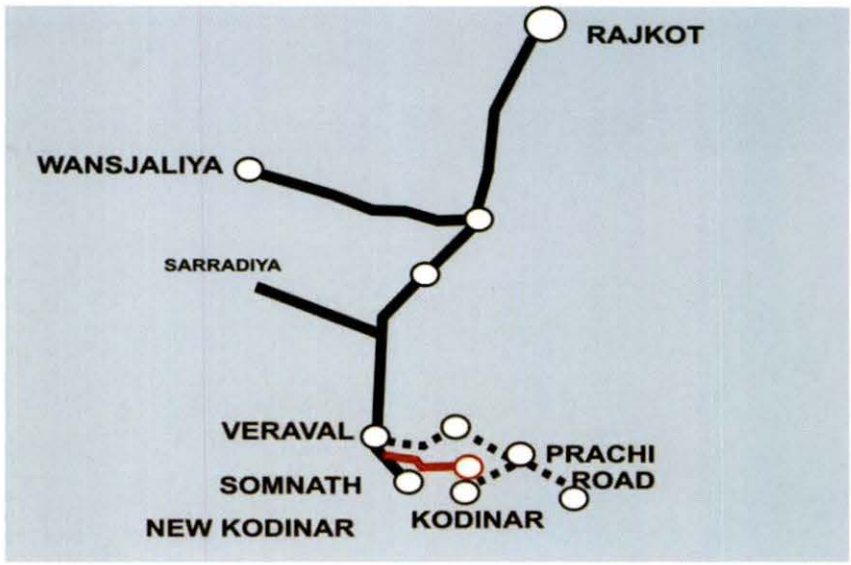
crore. The work was commissioned in November 2004.	Somnath to Veraval New line	The work was sanctioned at an estimated cost of ₹14.52 crore in October 2002. Detailed Estimate not sanctioned. It was completed in October 2008. Both the above MMs were executed irregularly and without requisite approvals. This was commented on in the Railway Audit Report No.9 of 2004
	Shapur-Saradiya Gauge Conversion (46 km)	The work was sanctioned at an estimated cost of ₹196.30 crore in April 2011 after completion of the original work. Detailed Estimate not sanctioned (January 2014).
	Somnath-Kodinar New line (36.91 km)	The work was sanctioned at an estimated cost of ₹252.68 crore in April 2011 after completion of the original work. Detailed Estimate not sanctioned (January 2014) Both the works are yet to commence as Detailed Estimate have not been sanctioned (January 2014). Due to addition of the above MMs to the original work of Rajkot-Veraval work the estimated cost of the works increased from ₹100 crore to ₹661.50 crore, an increase of 561 per cent.
(b) Bhildi-Viramgam GC + NL project The project was sanctioned in 1990-91 at a cost of ₹155.66 crore. It involved GC of Viramgam–Patan (104.6 km) and New line from Patan to Bhildi (51.03 km). GC works were completed in March 2008 and work of New Line is in progress (25 *per cent*) (January 2014)	Mahesana-Taranga hill Gauge Conversion (57.4 km)	The work was sanctioned at an estimated cost of ₹191.14 crore in April 2011. ROR of the project was assessed as (-) 1.40 *per cent*. The Detailed Estimate has not yet been sanctioned (January 2014). Due to addition of the above MM to the original work of Bhildi-Viramgam project the estimated cost of the work increased from ₹155.66 crore to ₹346.80 crore, an increase of 123 *per cent*.

(Source: Ministry of Railways File No.2011/W-1/WR/M/3)

Scrutiny of records by Audit revealed the following:

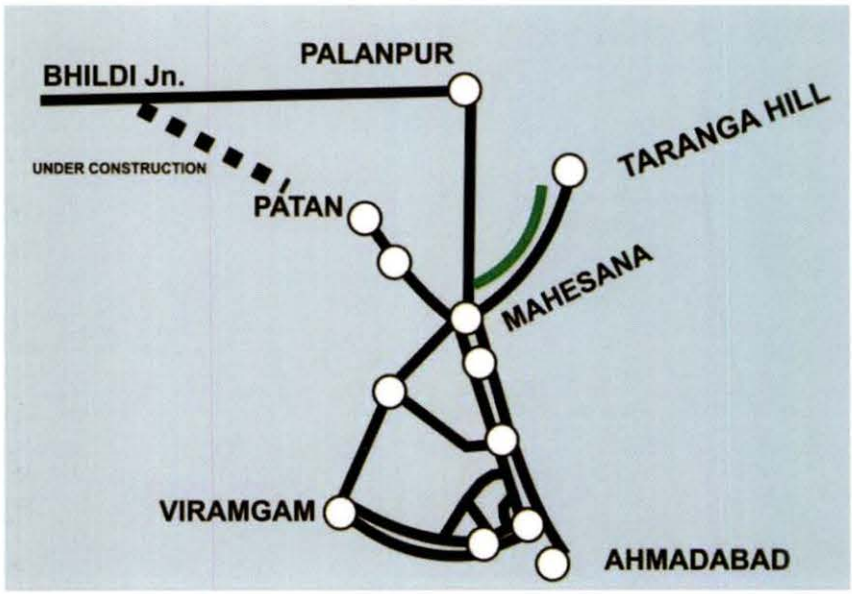
- As can be seen from the schematic diagrams below, all the above mentioned MMs were an offshoot from the original Gauge conversion Project and these were separate lines not falling in the alignment of the original project and cannot be classified as MM of the original project.

Fig. 3.9 – (a) Rajkot-Veraval Gauge Conversion Project



(Source: System Map of Western Railway)

Fig.3.10 – (b) Bhildi-Viramgam Gauge Conversion Project



(Source: System Map of Western Railway)

- The Railway Administration proposed the above works as MM instead of new works.
- In two cases, the works were sanctioned after completion of the original work. These works were yet to commence as the Detailed Estimates had not yet been sanctioned (January 2014). This indicates the lack of necessity of undertaking the work.
- Financial reappraisal of the original projects was not done again duly taking into account the cost of MM.

- The above procedure by passed the prescribed system of project approval laid down in their own codes and manuals and generally of the procedure laid down by the Ministry of Finance.

3.1.8.2.10 South Central Railway

From Table 3.10 it is seen that in South Central Railway one MM was sanctioned against one main work. This is discussed below:

Table 3.10

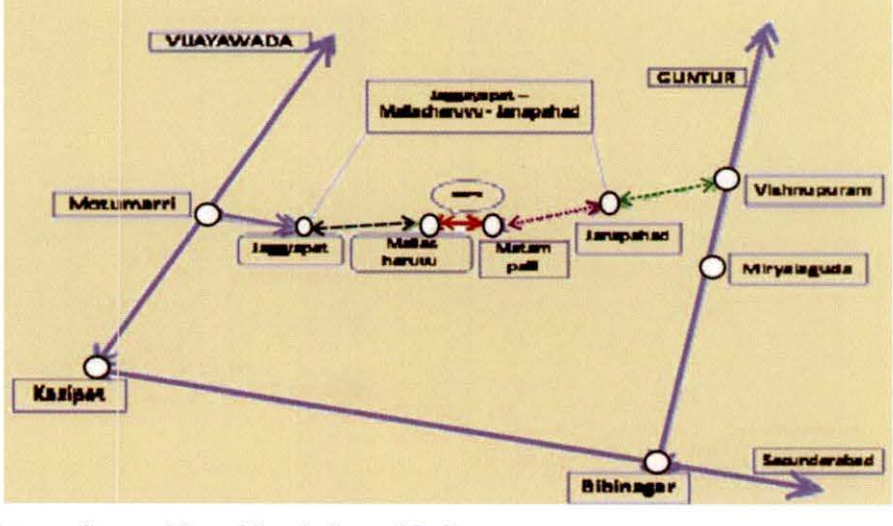
Present status of the main work	Nature/ Name of the MM work	Cost involved and present status of the work
Jaggayapeta-Mellacheruvu New Line (19.10 km) The original work was sanctioned in 2006-07 at a cost of ₹53.21 crore. The work was completed (March 2012).	Mellacheruvu-Janpahad New Line (24 km)	The work was sanctioned at an estimated cost of ₹174.56 crore in May 2011. The project was sanctioned by the Railway Board despite apprehensions regarding low volume of traffic expressed by the Zonal Railways. Land acquisition work has been started (January 2014). Due to addition of the above MM to the original work the estimated cost of the work increased from ₹53.21 crore to ₹227.77 crore, an increase of 328 *per cent*.

(Source: Ministry of Railways File No 2006/W-2/SC/NL/JM and Extract of PCDO of CAO (C) and File No.C.221/97/J of South Central Railway)

Scrutiny of records by Audit revealed the following:

- As can be seen from the schematic diagram below, the MM was an off shoot from the original New line project and cannot be classified as a MM.

Fig. 3.11 - Jaggayapeta-Mellacheruvu New Line (19.10 km)



(Source: System Map of South Central Railway)

- The project did not fall in the category of MM as it fell on a separate alignment and should have been sanctioned separately as a new work.
- The MM was sanctioned by Railway Board despite objections regarding low volume of traffic raised by the Zonal Railways.

- Financial reappraisal of the original projects was not done again duly taking into account the cost of MM.
- The above procedure by passed the prescribed system of project approval laid down in their own codes and manuals and generally of the procedure laid down by the Ministry of Finance.

3.1.8.2.11 Southern Railway

From Table 3.11 it is seen that in Southern Railway, eight MMs (6-NL and 2-Oth) were sanctioned against two main GC works. The details are given below:

Table 3.11

Present status of the main work	Nature/ Name of the MM work	Cost involved and present status of the work
(a) Tiruchchirappalli-Thanjavur-Nagore GC The project was included in the Works Programme of 1995-96 at an estimated cost of ₹109.05 crore. The work was completed and opened for traffic in three phases between January 1998 and February 2009.	Nagore-Karaikal New Line (11 km)	The work was sanctioned at an estimated cost of ₹33.78 crore in November 2002. The Detailed Estimate was sanctioned in June 2010. The work was completed and the section was opened for traffic in January 2010 and December 2011 respectively. As on June 2010 the completion cost of the project was ₹86.44 crore which was more than 100 *per cent* of the originally sanctioned cost.
	Nagapattinam-Velankanni New line (10 km)	The Detailed Estimate was sanctioned at a cost of ₹23.69 Crore in May 2002. Though the scheduled period of completion as per survey was one year only, the work could be completed in December 2010 with time overrun of 84 months due to delay in finalizing the alignment. The revised estimated cost of the work was ₹48.35 crore (June 2010) which was more than 100 *per cent* of the originally sanctioned cost.
	Nagapattinam-Tiruturaipundi New Line (35 km)	The work was sanctioned at an estimated cost of ₹126.14 crore in 2009-10 after the completion of the original project in February 2009. Detailed Estimate was sanctioned in June 2010. The ROR of the project was assessed as (-) 0.345 *per cent.* The work is in progress (February 2014).
	Karaikal-Peralam New Line (23 km)	The work was sanctioned at an estimated cost of ₹110.19 crore in 2013-14 after the completion of the original project in February. Detailed Estimate not sanctioned. Financial reappraisal/revision of ROR was not done duly taking into the cost of MM. The work is yet to be taken up (February 2014).
	Additional facilities at Nagore and Nagapattlnam	The work was sanctioned at an estimated cost of ₹4.17 crore in 2000. This is the only work which fall under the category of MM. Due to addition of the above MMs to the original work of Tiruchchirappalli-Thanjavur-Nagore GC project the estimated cost of the work increased from ₹109.50 crore to ₹486.34 crore, an increase of 344 *per cent.*
(b) Mayiladuthurai-Thiruvarur-Karaikudi and Tiruturaupundi-Agasthiampalli GC	Restoration of dismantled line Nidamangalam-Mannargudi (13.25 km)	The work was sanctioned at an estimated cost of ₹62.17 crore with ROR of 4.5 *per cent* in 2010-11. Detailed Estimate was sanctioned. It was completed and opened for traffic in September 2011.

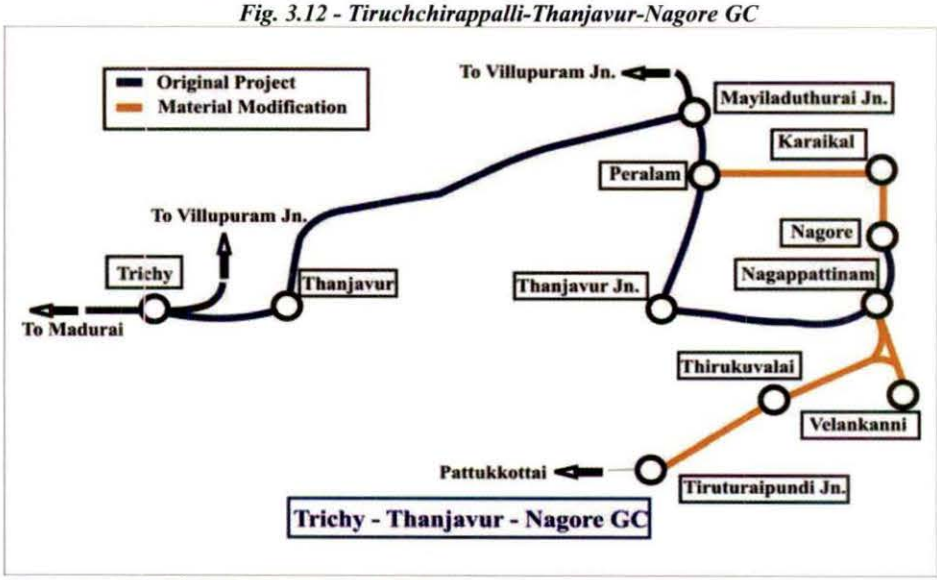
The original work was included in the Budget of 2007-08 at a cost of ₹404.19 crore. Work between Mayiladuthurai and Thiruvarur was completed and opened for traffic in July 2012. The balance work is in progress for which no target date of completion has been fixed (February 2014).	Mannargudi-Pattukkottai New line (41 km)	The work was sanctioned at an estimated cost of ₹215.59 crore with the ROR of 4.59 *per cent* in 2010-11. The Detailed Estimate not sanctioned. The MM work is at initial stage as FLS work is in progress (February 2014).
	Thanjavur-Pattukkottai New line (47 km)	The work was sanctioned at an estimated cost of ₹290.05 crore with the ROR of 14.18 *per cent* in January 2013. Detailed Estimate not sanctioned. FLS work is in progress (February 2014). Due to addition of the above MM to the original work of Mayiladuthurai-Thiruvarur-Karaikudi and Tiruturaupundi-Agasthiampalli GC project the estimated cost of the work increased from ₹109.05 crore to ₹484.34 crore, an increase of 344 *per cent*.

(Source: Ministry of Railways File No.2006/W-I/GC/SR/MKA/TP, File No 92/W2/GC/S/25 and Southern Railway's File No.W 182/CN/MS/Survey/217, File No.W.227/1/133/CN, File No.W182/MS/Survey/180 and File No.W.337/1/176/CN)

Scrutiny of records by Audit revealed the following:

- As can be seen from the schematic diagram below, the MM projects of Nagore-Karaikal New Line (11 km), Nagapattinam-Velankanni New line (10 km), Nagapattinam-Tiruturaipundi New Line (35 km) and Karaikal-Peralam New Line (23 km) were an off shoot from the original GC project of Tiruchchirappalli-Thanjavur-Nagore GC. These were separate lines not falling in the alignment of the original projects and cannot be classified as MMs to the original projects.

Fig. 3.12 - Tiruchchirappalli-Thanjavur-Nagore GC



(Source: System Map of Southern Railway)

- The above MMs have no connection with the original project except the fact that it touched a station on the alignment of the original project and the work was required to be sanctioned as a new work.

- Booking of expenditure of restoration of dismantled line / New Line to Gauge Conversion work was a wrongful accounting disclosure procedure as these two fall under different Plan Heads[158].
- In one case, ROR was not assessed and in another case the ROR assessed was negative.
- Financial reappraisal of the original projects was not done again duly taking into account the cost of MM.
- The above procedure bypassed the prescribed system of project approval laid down in their own codes and manuals and generally of the procedure laid down by the Ministry of Finance.

3.1.9 Payment of Dividend

Ministry of Railways is required to pay dividend to the Ministry of Finance on its[159] capital investment. It is also allowed to defer dividend on New Lines taken up on other than financial consideration during the period of construction and for the first five years after opening of the lines for traffic. Out of the 91 MM projects, 44 New Line projects (Plan Head 11) costing ₹7149.71 crore were sanctioned as MM to Gauge Conversion project (Plan Head 14)/Track Doubling (Plan Head 15) /Restoration of Dismantled lines (Plan Head 13). This misclassification will lead to payment of dividend to General Revenues of ₹5719.20 crore at the rate of four *per cent* per annum which was avoidable in view of the existing provisions.

3.1.10 Summary of Audit Findings

Audit analysis revealed that while 38 original projects were sanctioned at a cost of ₹9212.92 crore, as many as 91 projects costing ₹13383.86 crore were sanctioned as MM. Thus the cost of the MM works was even more than the cost of the original projects. In two Zonal Railways viz. Eastern Railway and South Eastern Railway, there were 20 original projects costing ₹3526.74 crore (38.28 *per cent* of total cost of original works of all the zones) which alone accounted for 46 MMs costing ₹7484.22 crore (55.92 *per cent* of total cost of MMs of all the zones).

Audit scrutiny revealed that Ministry of Railways has in a number of cases flouted the procedure laid down for both formulation and approval of projects. Even preliminary procedures like conducting a Techno Economic Survey have not been followed. In fact the standard procedure of taking approval of the Planning Commission before inclusion of a work in the Annual Works Programme was also not followed. The slow progress of works indicates the budgetary problems being faced by MoR and that the works sanctioned do not abide by National Plan priorities.

The main issues emerging from the audit are summarised below:-

- During the period of review it was seen that as many as 53 projects[160] were sanctioned during the period 2009-10 to 2011-12.
- Works were sanctioned as MMs against a main work even though they did not fall under the category of MMs; these new projects were on adjoining/

[158] Dismantled Line (Plan Head 13)/ New Line (Plan Head 11), Gauge Conversion (Plan Head 14)
[159] As per Annexure C of Ministry of Railways Circular No.2013/AC1/6/1, dated 22/03/2013
[160] ER-27, SER-9, NR-2, NFR-5, SECR-1, ECOR-2, WR-3, SCR-1, SR-3

separate alignments. Further, in 11 cases (SER-7, ER-2, NWR-1 and SECR/ECOR-1) these MMs did not even have any station on the originally sanctioned project.

- 32 MMs[161] were approved after completion of the original project. In fact in some cases the MMs were sanctioned as late as eight years[162] (Northeast Frontier Railway) after completion of the original project. Further, 2 MM projects (Sadulpur-Hissar-NWR and Digha-Egra-SER) were approved even before approval of the main projects.
- In a number of cases even the original scrutiny at the Zonal Railway level was not carried out.
- 55 MM projects were sanctioned as New Line projects against Gauge Conversion project, Track Doubling, Restoration of Dismantled line projects. This is totally irregular as they fall under different Plan heads and require separate sanction as per laid down procedure for investment decision. It was seen that mostly New Line Projects were sanctioned as MM against Gauge Conversion projects.
- Railway codes prescribe that before sanctioning a MM its Rate of Return (ROR) has to be assessed and the ROR of the entire project also has to be re-assessed. Further a project can be accepted as financially remunerative only if it gives a rate of return not less than 14 *per cent*. It was seen that 39 MMs[163] were sanctioned without assessing the ROR of the project; the ROR assessed was negative in 35 MMs [164], in 14 MMs though the ROR was evaluated it was less than the prescribed 14 *per cent*. In, only three MMs[165] the assessed ROR was more than the prescribed benchmark. It was seen that no de novo techno economic survey was conducted either to assess the ROR of the project or the impact of the MM on the main project.
- As on January 2014, out of 91 MMs test checked, in 37 MMs, Detailed Estimates had not been not sanctioned[166]. For 20 MMs of Eastern Railway, no details are available. Even the Final Location survey had not been carried out (SER-2, NFR-2 and ER-10) in 14 projects.
- In respect of 31 MM projects (Eastern Railway-24[167] and South Eastern Railway-8[168]) although these were declared as Special Railway Project[169] (2010-2011), no land had been acquired (January 2014).

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[161] North Western Railway-3, Northeast Frontier Railway-5, East Central Railway-5, Western Railway-2, Southern Railway-2, Eastern Railway-8 and South Eastern Railway-7

[162] The MM of Itahar-Buniadpur NL was sanctioned in September 2012 while the main work of Eklakhi-Balurghat NL was completed in December 2004.

[163] North Western Railway-4, Northeast Frontier Railway-4, East Central Railway-9, Eastern Railway-12, South Eastern Railway-9 and East Coast Railway-1

[164] Northern Railway-2, North Western Railway-1, Northeast Frontier Railway-5, Eastern Railway-20, South Eastern Railway-4, South East Central Railway -1, Western Railway-1, Southern Railway-1

[165] MM work of Thanjavur-Pattukkottai NL (14.18 per cent) on Southern Railway, MM work of Kendri-Dhamtari including Abhanpur-Rajim GC (14.38 per cent) on East Coast Railway and MM work of Amta-Bagan NL (19.69 per cent) on South Eastern Railway

[166] Northern Railway-2, Western Railway-5 ,Southern Railway-3 and Eastern Railway-27

[167] Chandnagar-Bakkhali, Tarakeswar-Dhaniakhali, Irphala-Ghatal, Arambagh-Champadanga, Bongaon-Chandabazar, Bongaon-Poramaheshtala, Chandabazar-Bagdah, Prantik-Suri, Chowringacha-Sainthia, Baruipara-Furfura Sharif, Katwa-Manteswar, Negum-Mangalkot, Manteswar-Mermari, Kalikapur-Minakhan, Budge Budge-Pujali, Pujali-Uluberia, Pujali-Bakarahat, Joynagar-Raidighi, Joynagar-Durgapur, Namkhana-Chandranagar, Dhubulia-Charatala, Arambagh-Irphala, Ranaghat (Aranghata) – Dutta Phulia and Bira-Chakla

[168] Mukutmonipur-Uparsol, Bankura-Purulia, Amta-Bagnan, Champadanga-Tarakeswar, Jangipara-Furfura Sharif, Deshpran-Nandigram, Kanthi-Egra and Digha-Egra

- In Eastern and South Eastern Railway, 16 MMs were announced in the Railway Budget[170]. No ground work was done in these projects before they were announced.
- It was seen that 67[171] of the 91 MM projects were not proposed by the Zonal Railway Administrations.

The status of implementation of the test checked works sanctioned as MM during the period 2003-04 to 2012-13 is tabulated below-

Table 3.12

Sl. No.	Particulars	No. of works
1.	Number of works sanctioned as MM	91
2.	Out of 91 MMs, number of works completed	15
3.	Number of works not completed[172]	76

From the above table it is seen that during the period of the report, only 15 works (16.48 *per cent*) were completed out of the 91 works sanctioned as MM. Nine of these works was sanctioned between 2000 to 2002, five works were sanctioned between 2003-2008 and only one work was sanctioned in 2010-11. Test check by audit revealed that in 32 MMs (NR-2, NWR-2, NFR-3, ECR-2, E Coast-2, WR-3, SR-1 & ER-17) work has not even started as of January 2014.

[169] Special Railway Projects are those projects which are declared under Railways (Amendment) Act, 2008 which empowers the Central government to acquire land in a time bound manner.
[170] Railway Budget 2009-10 to 2012-13
[171] E Rly-32, SE Rly-13, NE Rly-2, SC Rly-3, NF Rly-9, SEC Rly-5, NW Rly-3
[172] Delay period ranged from – For main work – 6 years (Mayiladuthurai-Thiruvarur-Karaikudi and Tiruturaupundi-Agasthiampalli GC work on SR) to 23 years (Bhildi-Viramgam GC & NL work on WR). For MM work – 1 year to 11 years (Bihar Sharif-Barnigha NL on E Central Rly)

Appendix –I

Statement showing the number of MMs sanctioned against main works in Eastern and South Eastern Railways

Eastern Railway

Examination of Annual Works Programme reveals that in Eastern Railway, thirty two MMs (28 NLs, two GCs, one other and one Track Doubling) were sanctioned against 16 main works (5-NL, 9-Track Doubling, 1-GC and 1-Other). The details are given below:

Present status of the main work	Nature/ Name of the MM work	Cost involved and present status of the work
(a) Lakshmikantapur-Namkhana New Line (46.61 km) The work was sanctioned in 1987-88 at a cost of ₹100.89 crore and opened for traffic in 2006.	Namkhana-Chandranagar New Line (14 km)	The work costing ₹78.90 crore was included in the Budget for 2009-10. ROR has not been assessed. Detailed Estimate not sanctioned. The FLS was completed and work is in progress (January 2014).
	Kakdwip-Budakhali New Line (5 km)	The work costing ₹61.85 crore was included in the Budget for 2011-12. Detailed Estimate not sanctioned ROR has not been assessed. The FLS has not yet been completed (January 2014).
	Chandranar - Bakkhali New Line (17.2 km)	The work costing ₹165.35 crore was included in the Budget for 2011-12. Detailed Estimate not sanctioned ROR has not been assessed. The FLS has been completed (January 2014). Due to addition of the above MMs to the original work, the estimated cost of the work increased from ₹100.89 crore to ₹406.99 crore (an increase of 303 *per cent*). The above projects were sanctioned after completion of the main project.
(b) Tarakeshwar-Bishnupur New line (82.47 km) The work was sanctioned in 2000-01 at a cost of ₹479.20 crore. As of January 2014, the overall progress was 70 *per cent*.	Tarakeswar-Dhaniakhali New Line (19 km)	The work costing ₹133.58 crore was sanctioned in November 2009. FLS had been completed except 2 km near Dhaniakhali where there are heavy settlements. ROR of the project was not assessed. Detailed Estimate not sanctioned. No target date of completion has been fixed (January 2014). Work was held up due to non-availability of land (January 2014).
	Arambagh-Irphala New Line (18.3 km)	The work costing ₹149.53 crore was sanctioned in 2010-11. The FLS was completed and ROR was assessed at (-) 4.88 *per cent*. Detailed Estimate not sanctioned. There was no physical progress (January 2014).
	Irphala – Ghatal New line (11.2 km)	The work costing ₹95 crore was sanctioned in 2011-12. The FLS was not completed and ROR was assessed at (-) 4.88 *per cent*. Detailed Estimate not sanctioned. There was no physical progress (January 2014).
	Arambagh – Champadanga	The work costing ₹288.81 crore was sanctioned in 2011-12. Detailed Estimate not sanctioned. The FLS was not

	New line (23.3 km)	completed and ROR was not assessed. There was no physical progress (January 2014). Due to addition of the above MMs to the original work, the estimated cost of the work increased from ₹479.20 crore to ₹1146.12 crore (an increase of 139 *per cent*).
(c) Tarakeshwar-Magra New Line (51.95 km) The work was sanctioned in 2010-11 at a cost of ₹365.17 crore. There is no progress so far (January 2014). The ROR was assessed as (+) 6.12 *per cent*.	Tarakeshwar – Furfura sheriff New Line (21.75 km)	The MM was sanctioned in 2012-13 at an estimated cost of ₹162.37 crore. Detailed Estimate not sanctioned. ROR was assessed as (-) 10 *per cent*. Detailed Estimate has not yet been sanctioned (January 2014) as the FLS has not yet been completed (January 2014). Due to addition of the above MM to the original work, the estimated cost of the work increased from ₹365.17 crore to ₹527.25 crore (an increase of 44.46 *per cent*).
(d) Chandpara – Bongaon Track Doubling (9.77 km) The work was sanctioned in 2003-04 at a cost of ₹22.23 crore. The ROR was assessed as 1 *per cent*. The section was opened for traffic in July 2012.	Bongaon – Chandabazar New Line (121.5 km)	The MM was sanctioned in September 2009 at an estimated cost of ₹57.16 crore. Detailed Estimate not sanctioned. FLS was completed and the ROR of the project was highly negative (March 2013). At present the work of earthwork, minor bridges etc. Is in progress. No target date of completion has been fixed (January 2014).
	Bongaon – Poramaheshtala New Line (20 km)	The MM was sanctioned in 2010-11 at an estimated cost of ₹140.81 crore without assessing the ROR (March 2013). Detailed Estimate not sanctioned. FLS has not been completed. No target date of completion has been fixed (January 2014).
	Chandabazar – Bagdah New Line (13.86 km)	The MM was sanctioned in 2011-12 at an estimated cost of ₹117.77 crore assessing the ROR as (-) 14 *per cent* (March 2013). Detailed Estimate not sanctioned. FLS has not been completed. No target date of completion has been fixed (January 2014). Due to addition of the above MMs to the original work, the estimated cost of the work increased from ₹22.23 crore to ₹337.97 crore (an increase of 1420.33 *per cent*).
(e) Chinpai-Sainthia Track Doubling (31.61 km) The work was sanctioned in 2005-06 at an estimated cost of ₹86.66 crore. The work was completed and commissioned in May 2010.	Prantik-Suri New Line (33.98 km)	The MM was sanctioned in 2009-10 at an estimated cost of ₹149.55 crore assessing the ROR as (-) 6 *per cent*. Detailed Estimate not sanctioned. No target date of completion has been fixed (January 2014).
	Chowrigacha – Sainthia via Kandi New Line (56.50 km)	The MM was sanctioned in 2010-11 at an estimated cost of ₹302.15 crore assessing the ROR as (-) 24 *per cent*. Detailed Estimate not sanctioned. No target date of completion has been fixed (January 2014). Due to addition of the above MMs to the original work, the estimated cost of the work increased from ₹86.66 crore to ₹538.36 crore, an increase of 521 *per cent*.
(f) Shantipur-Kalinarayanpur Track Doubling The work was sanctioned in 2010-11 at a cost of ₹104.80	Ranaghat (Aranghata) – Duttaphulia New Line (8.17 km)	The MM was sanctioned in 2011-12 at an estimated cost of ₹69.76 crore assessing the ROR as (-) 13 *per cent*. Detailed Estimate not sanctioned. FLS has not been completed (January 2014).

crore with an estimated ROR of (-) 10 *per cent*. 90 *per cent* of the work has been completed (January 2014).		Due to addition of the above MMs to the original work, the estimated cost of the work increased from ₹104.80 crore to ₹174.56 crore, an increase of 67 *per cent* .
(g) Sondalia-Champapukur Track Doubling (23.64 km) The work was sanctioned in 2010-11 at a cost of ₹136.55 crore with negative ROR. Progress of work is only 35 *per cent* (January 2014).	Bira-Chakla New Line (11.5 km)	The MM was sanctioned in 2011-12 at an estimated cost of ₹129.97 crore assessing the ROR as (-) 13 *per cent*. Detailed Estimate not sanctioned. As of January 2014, the MM work was in progress. Due to addition of the above MM to the original work, the estimated cost of the work increased from ₹136.55 crore to ₹266.52 crore (an increase of 95 *per cent*).
(h) Dankuni-Chandanpur 4th line (25.41 km) The work was sanctioned in August 2010 at a cost of ₹198.88 crore. The ROR of the project was not available on record. The work is in progress (January 2014)	Baruipara – Furfura Shariff New Line (12.30 km)	The MM was sanctioned in 2011-12 at an estimated cost of ₹97.56 crore assessing the ROR as (-) 16 *per cent*. Detailed Estimate not sanctioned. FLS has not been completed (January 2014). Due to addition of the above MM to the original work, the estimated cost of the work increased from ₹198.88 crore to ₹296.44 crore (an increase of 49 *per cent*).
(i) Bardhaman-Katwa Gauge conversion (51.22 km) The work was sanctioned in 2007-08 at an estimated cost of ₹245.15 crore. The ROR was assessed as 10 *per cent*. Physical progress is only 50 *per cent* January 2014).	Katwa-Bararsau Dubling (30.59 km) Katwa (Dainhat) – Manteswar New line (34.4 km) Negum-Mangalkot New Line (8.60 km) Manteswar-Memari New Line (35.6 km)	The MM was sanctioned in 2011-12 at an estimated cost of ₹271.39 crore assessing the ROR as (-) 9 *per cent* and the work was in progress (January 2014). Detailed Estimate was sanctioned. The MM was sanctioned in 2011-12 at an estimated cost of ₹256.20 crore. Detailed Estimate was not sanctioned. The ROR of the project was not assessed. FLS has been completed (January 2014). The MM was sanctioned in 2011-12 at an estimated cost of ₹251.50 crore. Detailed Estimate was not sanctioned. The ROR of the project was not assessed. FLS of work has not been completed (January 2014). The MM was sanctioned in 2011-12 at an estimated cost of ₹82.11 crore assessing the ROR as (-) 16 *per cent*. Detailed Estimate was not sanctioned. FLS of work has not been completed (January 2014). Due to addition of the above MMs to the original work, the estimated cost of the work increased from ₹245.15 crore to ₹1106.34 crore (an increase of 351.31 *per cent*).
(j) Manderhill-Dumka-Rampurhat New Line (130 km) The work was sanctioned in 1995-96 at a cost of ₹259.34 crore. The ROR of the project was assessed (-) 11 *per cent*. Physical progress is only 40	Rampurhat-Murarai 3rd line (29.48 km)	The MM was sanctioned in 2011-12 at an estimated cost of ₹224.05 crore. The ROR of the project has not been assessed (March 2013). Detailed Estimate has not yet been sanctioned (January 2014). Due to addition of the above MM to the original work, the estimated cost of the work increased from ₹259.34 crore to ₹483.39 crore (an increase of 86.39 *per cent*).

per cent (January 2014) even after 18 years of its sanction.		
(k) Sonarpur – Ghutiarishariff Track Doubling The work was sanctioned in 2000-01 at a cost of ₹30.47 crore. The ROR of the project was assessed as (-) 11 *per cent*. The work was commissioned in November 2006.	Kalikapur-Minakhan via Ghatakpukur New Line (38 km)	After five years of commissioning of the original project, the MM was sanctioned in 2011-12 at an estimated cost of ₹268.55 crore. The ROR of the project was (-) 20 *per cent*. Detailed Estimate was not sanctioned. The work of FLS has not been completed (January 2014). Due to addition of the above MM to the original work, the estimated cost of the work increased from ₹30.47 crore to ₹299.02 crore (an increase of 881.35 *per cent*).
(l) Katwa-Patuli Track Doubling (17.70 km) The work was sanctioned in 2010-11 at a cost of ₹121.95 crore. The ROR of the project was not available. Physical progress is only 40 *per cent* (January 2014).	Ahmedpur-Katwa Gauge Conversion (51.92 km)	The MM was sanctioned in 2011-12 at an estimated cost of ₹357.08 crore assessing the ROR as (-) *6 per cent*. Detailed Estimate was sanctioned. The work is in progress (January 2014). Due to addition of the above MM to the original work, the estimated cost of the work increased from ₹121.95 crore to ₹479.03 crore (an increase of 292.80 *per cent*).
(m) New Alipur-Akra Track Doubling (9.76 km) The work was sanctioned in 1996-97 at a cost of ₹18.09 crore. The the work was commissioned in September 2004.	Budge Budge-Pujali New Line (11 km) Pujali-Uluberia (Birshivpur) New Line (10.25 km) Pujali-Bakrahat New Line (9.75 km)	After five years of the completion of the original project, the MM was sanctioned in 2009-10 at a cost an estimated cost of ₹97.17 crore assessing the ROR as (-) 16 *per cent*. Detailed Estimate was not sanctioned. FLS has not been completed (January 2014). After seven years of the completion of the original project, the MM was sanctioned in 2011-12 at an estimated cost of ₹295.84 crore assessing the ROR as (-) 17 *per cent*. Detailed Estimate was not sanctioned. FLS has not been completed (January 2014). After seven years of the completion of the original project, the MM was sanctioned in 2011-12 at an estimated cost of ₹83.48 crore assessing the ROR as (-) 20 *per cent*. Detailed Estimate was not sanctioned. FLS has not been completed (January 2014). Due to addition of the above MMs to the original work, the estimated cost of the work increased from ₹18.09 crore to ₹494.58 crore (an increase of 2634 *per cent*). As can be seen from the above, all the MMs were sanctioned after five years of completion of the original work.
(n) Dakshin Barasat – Laxmikantapur Track Doubling (19.68 km) The work was sanctioned in 2009-10 at a cost of ₹119.05 crore. The work was completed but has not yet been opened even after CRS inspection (January 2014).	Joynagar – Raidighai New Line (19.68 km) Joynagar – Durgapur New Line (32 km)	The MM was sanctioned in 2009-10 at an estimated cost of ₹140.46 crore. Detailed Estimate not sanctioned. ROR of the project was not assessed. As of January 2014, there was no physical progress. The MM was sanctioned in 2011-12 at an estimated cost of ₹273.87 crore assessing the ROR as (-) 14 *per cent*. Detailed Estimate not sanctioned. FLS has not been completed (January 2014). Due to addition of the above MMs to the original work, the estimated cost of the work increased from ₹119.05 crore to ₹512.06 crore (an increase of 330 *per cent*).

(o) Krishnagar-Kalinarayanpur Track Doubling (21.99 km) The work was sanctioned in January 2002 at a cost of ₹43.49 crore. The project was completed and commissioned in November 2010. The ROR of the project was (-) 21 *per cent*.	Krishnanagar-Shantipur Gauge Conversion (15.29 km) Krishnanagar City (Dhubulia)-Charatala New Line (13 km)	The MM was sanctioned in 2001-02 at an estimated cost of ₹34.85 crore assessing the ROR as (-) 23 *per cent*. Detailed Estimate was sanctioned. The work was completed and commissioned in February 2012. The project was sanctioned at an estimated cost of ₹119.38 crore assessing the ROR as (-) 13 *per cent* in 2001-02. Detailed Estimate was sanctioned.The work has not yet been started (January 2014). A comment was made in Chapter 1 of Audit Report No.9 of 2004 (Railways) regarding irregularly sanctioning of the above projects as MMs to the original work. In addition to the above, the Railway Board further sanctioned five more MMs to the original work viz. Gauge Conversion of Krishnanagar-Nabadwipghat (12.2 Km) costing ₹73.09 crore (September 2010), Nabadwipghat-Nanadwip Dham (9.58 Km) New line with bridge over river Hooghly along with extension to BB loop costing ₹250.83 crore, Strengthening of Bridge No. 2A of the original Track Doubling project costing ₹9.32 crore (November 2009), Krishnanagar-Chapra New line (19.2 Km) costing ₹171.39 crore and Providing third line between Naihati and Ranaghat (35.54 Km) costing ₹243.09 crore (September 2011). RORs of these MMs were not assessed/ not available. With the sanction of seven MMs, the total cost of Track Doubling between Kalinarayanpur and Krishnanagar estimated to cost ₹43.49 crore now comes to ₹945.46 crore (increase by 2074 *per cent*).
(p) Deoghar-Sultanganj New Line (119.12 km) The work was sanctioned in 2000-01at a cost of ₹282 crore. The ROR of the project was (-) 7.58 *per cent*. Physical progress is only 45 *per cent* January 2014).	Banka-Barahart New line (15.53km) Banka – Bitia road New line (22 km)	The project was sanctioned in 2001-02 at an estimated cost of ₹48.72 crore. Detailed Estimate was sanctioned. The work was completed and commissioned in August 2006. The project was sanctioned in 2001-02 at an estimated cost of ₹48.72 crore. ROR was not assessed. Detailed Estimate not sanctioned. The work has not yet been started (January 2014). A comment was made in chapter I of the Audit Report No.9 of 2004 regarding irregular inclusion of the above projects as MMs.

(Source: Ministry of Railways File No.2008/W-2/ER/NL/22 and Eastern Railway's File No.Acctts./Con/FX/CDP-BNJ/Doubl and File No.Acctts./Con/FX/LKPR-NMK-Chandranagar-Bakkali/NL)

South Eastern Railway

Examination of Annual Works Programme reveals that in South Eastern Railway, 14 NL MMs were sanctioned against 4 main works (1-GC and 3-NL). The details are given below:

Present status of the main work	Nature/ Name of the MM work	Cost involved and present status of the work
(a) Bankura-Damodar river Valley Railway GC project The work was sanctioned in 1998-99 at a cost of ₹100 crore and opened for traffic in three phases between September 2005 and January 2008.	Rainagar-Masagram New Line (20.9 km)	The Detailed Estimate was sanctioned at a cost of ₹46.25 crore in September 2002 with stipulated date of completion as December 2008. ROR was not assessed. The work was completed in April 2013 against the scheduled date of December 2008 (time overrun of 53 months). Cost of the project was increased from ₹46.25 crore to ₹144.36 crore (more than 3 times of the original estimate).
	Bankura (Chhatna)-Mukutmonipur New Line (48.25 km)	The Detailed Estimate was sanctioned at a cost of ₹85.63 crore in June 2005. ROR was not assessed. Physical progress is only 20 *per cent* (January 2014).
	Bowaichandi-Khana New Line (24.40 km)	The Detailed Estimate of ₹81.38 crore was sent by SE Rly in January 2005 and Railway Board sanctioned the part Detailed Estimate of ₹38.92 crore in August 2005. ROR was not assessed. No PET survey was conducted. Physical progress is only 20 *per cent* (February 2014).
	Mukutmonipur-Uparsol New line (26.7 km)	The Detailed Estimate was sanctioned at a cost of ₹211.51 crore in July 2011 assessing the ROR as (-) 5.05 *per cent*. The target date for completion was fixed as December 2016 subject to the availability of full land before December 2013, however, as of February 2014 no land was acquired.
	Bankura (Kalabati) – Purulia via Hura New line (65 km)	The Detailed Estimate was sanctioned at a cost of ₹294.89 crore in July 2011. ROR was not assessed No techno-economic survey was conducted. Physical progress is only 1 *per cent* (February 2014)
	Mukutmonipur-Jhilimili New Line (20.9 km)	The Detailed Estimate was sanctioned at a cost of ₹239.36 crore in March 2012 by Minister of Railways, within a period of 12 days of initiating the proposal. ROR was not assessed The project was approved without undertaking any PET survey. Except opening of a FLS tender in August 2012, no other work has been done and no target date for completion has been fixed (February 2014). Due to addition of the above MMs to the original work, the estimated cost of the work increased from ₹111.90 crore to ₹1028.47 crore (an increase of 819 *per cent*).
(b) Howrah-Amta BG line with a branch New Line Bargachia-Champadanga	Amta-Bagnan New Line (15.8 km)	The Detailed Estimate was sanctioned at a cost of ₹103.20 crore in October 2009. ROR was assessed as 19.69 *per cent* The work was inaugurated by the Minister of Railways in January 2010 and was notified as a 'Special Railway project'. In absence of availability of land and due to paucity of funds, contracts awarded

line The work was sanctioned in 1974-75 and the Detailed Estimate was sanctioned in February 1984 at a cost of ₹31.42 crore which was subsequently revised to ₹154.30 crore (July 2001). Howrah-Amta section was completed in phases and commissioned between 1984 and 2004. The branch line from Bargachia to Champaganda has been kept abeyance till further commitment of fund from RB (February 2014).		for several works in connection with the Project were proposed to be foreclosed. The progress of the work was only 3 *per cent* (February 2014). Due to non-availability of fund the the work has been kept in abeyance (February 2014). The Detailed Estimate was sanctioned at a cost of ₹38.73 crore in October 2009. ROR was assessed with a net loss of ₹40.49 crore. Physical progress is only 2 *per cent* and land acquisition was held in abeyance due to shortage of funds (February 2014). The Detailed Estimate was sanctioned at a cost of ₹97.23 crore in July 2011 assessing the ROR as (-) 4.40 *per cent*. The FLS work was in progress and land plans were under preparation. As of February 2014, the physical progress was 1 *per cent*. The project has been proposed for shelving. Due to addition of the above MMs to the original work, the estimated cost of the work increased from ₹154.30 crore to ₹393.46 crore (an increase of 154 *per cent*).
(c) Tamluk-Digha BG Rail Link The construction of Tamluk-Digha Rail Link was taken up in 1984-85 at an anticipated cost of ₹43.72 crore. The Detailed Estimate of ₹293.97 crore was sanctioned in April 2000. The New Line was completed and commissioned in two phases in November 2003 and December 2004.	Deshpran-NandigramNew Line (17 km) Kanthi-Egra New Line (26.2 km) Nandigram-Kandiamari New line (7 km) Nandakumar-Balaipanda New Line (17 km)	The Detailed Estimate was sanctioned at a cost of ₹121.43 crore in October 2009. ROR was not assessed. The project was approved without undertaking any PET. Despite acquiring 90 *per cent* of land, physical progress is only 30 *per cent* (February 2014). The Detailed Estimate was sanctioned at a cost of ₹247.27 crore in July 2011 assessing the ROR as (-) 4.60 *per cent*. The work was notified as a 'Special Railway project'. Physical progress is only 2 *per cent* (February 2014). The project has been proposed for shelving. The Detailed Estimate was sanctioned at a cost of ₹75.62 crore in July 2012. ROR was not assessed. Physical progress is only 1 *per cent* (February 2014). The project has been proposed to be shelved. The Detailed Estimate were sanctioned at a cost of ₹275.14 crore in June 2012. ROR was not assessed. A contract was awarded for FLS in September 2012 and the same was discharged subsequently. Target date of completion was not fixed as land is not yet available (March 2013). Physical progress is only 1 *per cent* (February 2014). The project has been proposed to be shelved. Due to addition of the above MMs to the original work, the estimated cost of the work increased from ₹293.97 crore to ₹1013.43 crore (an increase of 245 *per cent*).
(d) Digha-Jaleswar New Line-Minister of Railways in Budget Speech of	Digha-Egra NL (31 km)	The Detailed Estimate were sanctioned in May 2011 at a cost of ₹298.52 crore assessing the ROR at (-)5.07 *per cent*. Land acquisition was stopped due to shortage of funds. Physical progress was only 2 *per cent* (February 2014). The project has been proposed to be shelved.

2009-10 announced a New Railway Line Digha-Jaleswar-Puri. Though the PET survey envisaged ROR of (-) 5.04 per cent, the project was sanctioned at a cost of ₹352.65 crore in July 2012. No target date of completion ws fixed. Work is in progress.		Owing to addition of the above MM to the original work, the estimated cost of the work increased from ₹352.65 crore to ₹651.17 crore (an increase of 85 *per cent*).

(Source: Ministry of Railways File No.2011/W-2/SER/NL/11, File No.2010/W-2/SER/NL/18, No.2012/W-2/SER/NL/05 and South Eastern Railway's File No.CAO(C)/GRC/MCDO/2013/01-15 and File No.PD/W/746/Spl., No.PD/W/255/E/761)

3.2 South Western: Railway (SWR) — Acceptance of substandard formation works in construction of a new line endangering safety

The commissioning of a new line (cost ₹351.48 crore) without rectifying the major deficiencies in 'formation work' resulted in opening of a new line section for regular traffic compromising the safe operation of trains/ safety of travelling passengers

'Formation' is the bank formed for laying the railway track by utilizing earth (soil). It is an integral part of the Railway track structure. A stable and strong 'formation' is, therefore, essential for the safety of track/ safe running of trains. As such, earthwork[173] for the construction of formation is very important. Research, Design and Standard Organisation (RDSO), Lucknow is the technical advisor to Railway Board/ Zonal Railways. The Organisation develops designs/ standards of materials, conducts technical tests/ investigations and gives statutory clearances. When the construction of a Railway line is complete, it is offered for inspection of Chairman Railway Safety (CRS) for obligatory permission to open the line for Passenger traffic.

The Construction of new Broad Gauge (B.G.) line between Kottur - Harihar included inter alia earthwork and blanketing[174] for which Construction Organisation, South Western Railway, Bangalore Cantonment (CNBNC) awarded 11 contracts. When the contractors had almost completed the work (January 2009), soil tests results indicated that the soil utilised on the works were not of required specifications. Therefore, the Chief Engineer/ Construction (East-General), Bangalore Cantt requested RDSO (January 2009) to conduct tests for soil and blanketing material utilized. After conducting tests, Senior Executive Director/ Geo Engineering, RDSO communicated the test results (April 2009) as under-

(i) The compaction[175] of earth was not as per the specifications in terms of degree of compaction. Proper compaction of sub-grade[176] as well as blanketing material was required to be ensured before laying the ballast[177];

(ii) Since no berm[178] had been provided for banks of more than six meters height, slope stability of embankment[179] would need to be re-checked before the opening of Railway line for traffic;

(iii) The blanketing material utilised was not as per RDSO's specifications and had more fines[180] with reference to permissible limits. As such, minimum

[173] Formation of bank on plain topography and formation of cuttings on elevated topography.
[174] Covering with hard material the top of bank formed. The objective of this activity is to provide stability to the formation.
[175] Rolling of utilised earth to bring it in dense form.
[176] Earth of formation just beneath the blanket material.
[177] Granite Stone pieces (50 mm size) spread over the formation and packed below the sleepers to act as shock absorber.
[178] A step provided in the bank if its height is more than nine meters
[179] Bank formed above the ground.
[180] Granular blanket material.

100 cm thick blanket material conforming to specifications should be provided in stretches having SC type[181] of soil. Further, provision for additional 30 cm blanket thickness would be required over and above 100 cm in view of section being proposed for 25 tonne axle load traffic,

(i) Longitudinal cracks appeared on top of the formation due to improper amalgamation[182] /bonding[183] between old and new earthworks.

Audit observed that-

- Despite the fact that RDSO had brought out serious deficiencies about the quality of the work, and Construction Authorities had an opportunity to get the defects rectified free of cost, the Chief Administrative Officer (CAO), CNBNC Authorities allowed the contractors to continue the work of spreading of ballast and linking of track between April 2009 and June 2010.
- Though the contracts provided for the execution of all the works as per RDSO's specifications, the Chief Administrative Officer (CAO) did not direct the contractors to rectify the defects free of cost. He instead engaged (July 2010) a private agency[184] to test the blanketing material. During tests, all the 20 samples failed to meet the required quality standards. Even after this, the CAO nominated a committee of Junior Administrative Grade officers (August 2010) to study the blanketing material. The Committee reported (September 2010) that the blanketing material did not meet with any of the prescribed specifications. Construction Authorities of South Western Railway also got the blanketing material tested (August 2010) from Civil Engineering faculty of Bangalore University (University). The University observed that most of the soil samples failed to qualify as per RDSO's specifications; however, the utilised soil fulfilled the primary and secondary functions[185] intended to be satisfied by the blanketing material. The base soil was found to be well graded and of adequate strength and with suitable drainage characteristics. They ultimately viewed that the base soil and blanketing provided in the Railway line was suitable as sub-base[186] and blanket.
- Considering the opinion of the University, the CAO decided (June 2012) to avoid incurring extra liability to rectify the deficiencies in the track works. He issued order (June 2012) that (a) payment to contractors for executing blanketing work would be restricted to the cost of earth brought by the

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[181] Sandy clay soil having plastic index more than seven. Plastic index denotes the elasticity.
[182] Merging for harmonisation.
[183] Adhesion due to intermediate forces.
[184] M/s Civil Aid Techno clinic Pvt. Ltd.
185 Primary function is stress reduction function which reduces the traffic induced stresses at the bottom of ballast layer to a tolerable limit on the top of sub-grade.
Secondary functions are separation function (prevents the penetration of ballast into the sub-grade and the upwards migration of fine particles from sub-grade into ballast), drainage function (intercept water coming from the ballast away from the sub-grade and at the same time permit drainage of water flowing upward from the sub-grade) and prevention of mud pumping (prevents mud pumping by checking the attrition of sub-grade particles by ballast)
[186] Upper layer of soil formation.

contractor only and (b) a penalty equal to 10 *per cent* of the value of the blanketing work as per contract rate would be imposed. The total amount recoverable from the contractors was ₹2.36 crore (₹1.91 crore and ₹0.45crore).

- The Railway Administration offered the line for CRS inspection (December 2013). During CRS inspection, the Railway Administration certified that the formation in bank was made of good soil conforming to RDSO specifications and there had not been any deviation in design, material and construction of the works. Construction Authorities did not bring to the notice of the CRS the major deficiencies pointed out by the RDSO and non-rectification thereof either by the contractors or by the CNBNC itself.
- The CRS authorized the new line section for running passenger trains as "One Train Only System" and the train services commenced (March 2014). No document was available with the construction Authorities to show the reasons for introduction of 'One train only system'.

Although RDSO, the ultimate technical Advisor of Indian Railways had detected serious deficiencies with reference to the prescribed standards/ specifications, CNBNC Administration failed to get the defects rectified free of cost from the contractors thus compromising the standards of safety fixed for safety of track formation. The CNBNC Administration instead proceeded to complete ballasting and track linking works. Moreover, even though RDSO had pointed out serious deficiencies in 'formation work' Construction Authorities certified the execution of work as acceptable at the time of CRS's inspection. Further, instead of directing the contractors to rectify the defects, a penalty of ₹ 2.36 crore only was levied on the contractors towards deficient working. CNBNC also did not rectify the work themselves.

Thus, the track has been left with inherent major deficiencies. The commissioning of the new line (cost ₹351.48 crore) without rectifying the major deficiencies in 'formation work' resulted in opening of a new line section for regular traffic compromising the safe operation of trains and safety of travelling passengers.

The matter was brought to the notice of Railway Board in May 2014; their reply has not been received (July 2014).

3.3 North Western Railway (NWR): Loss due to non-preferring of bills for way leave charges

Failure of NWR Administration to prefer bills for way leave charges for the railway land occupied and utilized by Jaipur Development Authority resulted in loss of revenue to the tune of ₹30.02 crore for one year alone (2012-13)

As per Para 1033 of the Indian Railway code for the Engineering Department (2012 edition), way leave facilities/ easement rights on railway land involve occasional or limited use of land by a party for a specified purpose like passage etc. without conferring upon the party any right of possession or occupation of the land and without in any way affecting the railway's title, possession, control and use of the land. Sub-Para 5 (ii) of the above Para also provides that way leave

charges at the rate of six *per cent* of the market value of the land per annum subject to revision every five years should be recovered for passage/ road, public road by local bodies/ State Government/ Autonomous Bodies/ Charitable/Welfare Organisation, etc.

During review by Audit (June 2013), it was noticed that four pieces of railway land (as given in the *Table 3.13* below) at Jaipur were occupied by Jaipur Development Authority (JDA) and roads were constructed on all of them.

Table 3.13

Sl. No.	Name of the site of the Railway land	Patches of land	Area (in sqm)	Rate of land (as of November 2012) (₹ per sqm)	Value of land as on 2012-13 (in crore of ₹)	Occupied since	Present status
1.	Closed Jagatpura-Shivdaspura line	Revenue Village I.Jagatpura II.Tilawala III.Shri kishanpura IV. Jeerota V. Ramchandrapura	 27300 94100 78500 46100 51700	 20880 20880 14620 14620 7320	473.49	1998	Railway Administration had approached (March 2002 to May 2013) Government of Rajasthan for exchange of land
2.	Near Durgapura Station	In front of Durgapura Railway Station	759.25	68880	5.23	2008	
3.	Near Gandhinagar Railway Station	Between LC No.217 and 218 near Gandhinagar Railway Station	1316.095	96000	12.63	2008	
4.	Near Bais Godam Railway Station	Near Bais Godam Railway Station	1742.55	52190	9.09	2008	Railway in November 2012 desires return of land from JDA.
Total			**301518**		**500.44**		

(Source: Joint Note of Divisional Engineer (South), DRM/Jaipur and Dy. Commissioner, JDA/Jaipur)

Thus, the JDA is in unauthorized occupation of the Railway's above land measuring 301518 sqm worth ₹500 crore.

Railway Administration (NWR) instead of protecting its assets and levying way leave charges approached the State Government (November 2005 and November 2012) for an alternate land in place of the land occupied by the JDA in three cases and return of land was sought in only one case i.e. Bais Godam Railway station. Secretary, JDA in August 2009 confirmed that they were using Railway's land as they had constructed road on all the above mentioned land and in principle agreed to provide alternate land in exchange of Railway land. However, neither were any way leave charges levied nor has any alternate land been allotted. Thus, failure to prefer bills for way leave charges for the railway land occupied and utilized by Jaipur Development Authority resulted in loss of revenue to the Railways. The loss of revenue for the year 2012-13 only is estimated at ₹30.02 crore[187].

When the matter was brought to the notice of NWR Administration in June 2013 and July 2013 respectively, they stated (December 2013) that the issue of unauthorized occupation of railway land by JDA had been taken up at the highest

[187] Way leave Charges for one year i.e. 2012-13 @ six *per cent* of cost of land (District Level Committee rates) = ₹500 crore (x) 6 per cent = ₹30.02 crore

level and a meeting was held in (August 2012) and a decision was taken to transfer JDA land at Bhatesari village measuring 51.46 hectare in lieu of the encroached land of Jagatpura-Shivdaspura closed line. The Railway land encroached by JDA would be exchanged on equivalent cost basis after sanction of Railway Board.

The reply is however not acceptable. The use of Railway land by any other entity for construction of road is covered under Para 1033 of the Indian Railway code for the Engineering Department (2012 edition), which clearly provides for levy of way leave charges.

Exercise of required vigilance by NWR Administration to check unauthorized occupation of Railway land and preferment of the bills for way leave charges could have resulted in avoidance of loss of ₹30.02 crore for the period 2012-13 alone.

The matter was brought to the notice of Railway Board in February 2014; their reply has not been received (July 2014).

3.4 Northeast Frontier: Railway (NFR) — Loss due to inordinate delay in construction of Pit Line

Delay in construction of Pit Line at Kishanganj of NFR resulted in avoidable haulage cost of ₹ 22.18 crore of empty rake of 'Garib Nawaj' from Kishanganj to New Jalpaiguri

In August 2005, Railway Board announced the introduction of a train service between Kishanganj (Bihar) and Ajmer (Rajasthan). Ministry of Railways (Railway Board) directed (August 2005) Northeast Frontier Railway to examine the feasibility of introducing the train service together with the construction of a new pit line[188] at Kishanganj to facilitate cleaning during primary maintenance of rakes.

In Para 2.2.9 of Railway Audit Report No.19 of 2009, mention has been made that due to non-construction of pit line facility at Kishanganj, the rake of 'Garib Nawaj' express train (5715/ 5716) between Kishanganj and Ajmer was being hauled empty to New Jalpaiguri which involved a distance of 176 kms (both ways) for providing pit line examination after termination at Kishanganj. The loss towards avoidable empty haulage of the rake was worked out by Audit as ₹ 1.15 crore for the period August 2006 to March 2008.

The Ministry of Railways, in their Action Taken Note stated (October 2010) that the work could not be taken up immediately due to change in drawings and delay in dismantling of Metre Gauge (MG) line. They further stated that since the train cannot be run without primary maintenance, the empty haulage and expenditure was absolutely unavoidable to ensure safety.

Further scrutiny in June 2013 revealed that till date the work is incomplete as per the following details:

(i) NFR sent the proposal for development of Train Examination facilities at Kishanganj on 'Out of Turn' basis to Ministry of Railways in August 2005 and the work was sanctioned in the Annual Works Programme of 2006-07. The actual work commenced in May 2007.

[188] A full rake comprising of various types of coaches is cleaned during primary maintenance on a pit line.

(ii) After execution of 75 *per cent* of the sanctioned work, the Construction Organisation of NFR in January 2010 expressed their inability to continue the construction work due to lack of funds and the contract was short closed in April 2010.

(iii) For execution of the balance 25 *per cent* work, a tender was finalized by NFR and Letter of Acceptance (LOA) was issued to another contractor in January 2012 stipulating that the work be completed within six months after issue of LOA. However, the contractor started the work belatedly in November 2012. As of January 2014, the contractor could achieve only 50 *per cent* of the balance work.

In reply to the above, NFR Administration in November 2013 stated that the balance works of pit line could not be completed due to inadequate allotment of funds. They further stated that this particular train would be extended to New Jalpaiguri (as announced in budget 2013-14) and as such there will be no empty haulage of the rake.

The contention of NFR Administration is not acceptable. The delay in construction of pit line was not due to fund constraints as seen in audit. The work of Pit Line work was proposed by NFR for ₹ 7.96 crore in August 2005. The work was sanctioned by the Ministry of Railways (Railway Board) in the Annual Works Programme (2006-07) for ₹ 3.5 crore. As of May 2013, ₹ 5.2 crore was incurred for this work. For the balance 25 *per cent* of the work, ₹ 98.34 lakhs have been sanctioned and out of which ₹ 37.15 lakhs have been spent till January 2014. Further, audit observed that till date the Train viz. Kishanganj-Ajmer Garib Nawaj Express was running only upto Kishanganj and had not been extended up to New Jalpaiguri.

Thus, non-completion of pit line facility at Kishanganj resulted in the rake being hauled empty to New Jalpaiguri for a distance of 176 kms (both ways) to avail pit line examination after termination at Kishanganj. This resulted in an avoidable expenditure of ₹ 22.18 crore during the period April 2008 to January 2014 and the same was likely to be compounded till commissioning of the pit line facility at Kishanganj.

The matter was brought to the notice of Railway Board in February 2014; their reply has not been received (July 2014).

3.5 Northeast Frontier: Railway (NFR) — Excess payment on purchase of ballast on account of incorrect measurement/ under-loading of ballast

Payment for ballast as per the quantity recorded in the measurement book, instead of actual weight recorded in Railway Receipts led to excess payment of ₹ 3.38 crore and avoidable loss of ₹ 10.06 crore due to non-recovery from the contractor on account of under-loading of ballast

As per Para 65 (2) of the Railways Act, 1989 (No.24 of 1989), the quantity recorded in the Railway Receipts (RRs) should be the prima facie evidence of the actual weight of the commodity.

Test-check by Audit of 12 contracts in respect of procurement of ballast in office of Sr. Divisional Engineer, Katihar of NFR in October 2011 revealed that payment to the contractors for procuring ballast were being made on the basis of quantity recorded in the ballast challans. The quantity recorded in the ballast challans[189] was being prepared on the basis of quantity recorded in the measurement book[190] on the basis of volumetric measurement (total volume of the quantity). This quantity when computed by Audit was found to be much more than the quantity recorded in the RRs. Thus, payment of ballast as per ballast challans, instead of actual weight recorded in RRs led to excess payment of ₹ 3.38 crore[191] during the period February 2008 to March 2013.

It was also noticed during the above test-check (October 2011) by audit that as per the contract condition, the contractors were required to load wagons to the full carrying capacity, including permissible overload and in case of under-loading by more than one tonne, proportionate recovery of freight was to be effected from their bills. Contradiction in above provisions made in the contract condition resulted in under-loading of 1,22,434.60 cum of ballast by the contractors during the period February 2008 to March 2013. This has resulted in avoidable loss of ₹10.06 crore[192] during the period February 2008 to March 2013 to the Railway. Further, NFR Administration failed to make the proportionate recovery from their bills.

When the matter was brought to the notice of the Ministry of Railways (Railway Board) in February 2014, they stated (June 2014) that the Railway Receipts (RRs) are prepared basically for booking of ballast for transportation to sites through railway wagons and are not basic documents of ballast supply contracts. As per provision laid down in the agreement, quantity of ballast is being measured in cum (volumetric) for payment purposes. In regard to loading of ballast, it was stated that the weight of ballast will depend on the percentage of water content in it. In different seasons the weight of same content will be different. Moreover, if rain takes place the weight will go up.

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[189] Para 1332 of the Indian Railway code for the Engineering Department – It is not usually convenient to record in measurement books detailed measurement of work done by contractors in connection with the working of ballast and material trains e.g. loading and unloading of ballast, permanent way and other construction materials. In such cases ballast train or material train challans in the Form E-1332 should be prepared in four copies by the subordinate supervising the loading of ballast or material.

[190] The measurement books should be considered as very important record. All the books belonging to a division should be numbered serially and a register of them (form E.1314) should be maintained in the divisional office.

[191] Quantity as per Ballast Challan (-) Actual quantity as per RR = Gross inflated quantity (-) [0.595 (page 23) (x) No. of wagons] = Net inflated quantity (x) Rate of ballast = Excess payment made

[192] Net Loadable weight (MT) (-) Actual weight (MT) as per RR = Under loading (MT) – (A), Freight per MT (Freight paid/charged weight) – (B), Loss due to under loading of ballast = Freight per MT (x) Under loading (MT) = (A) (x) (B), February 2008 to July 2011 = Loss due to under loading of ballast = ₹40742613.5 – (I) = Annexure B(1), August 2011 to March 2013 = Loss due to under loading of ballast = ₹59883417.25 – (II) = Annexure B(I1) , Therefore, total loss due to under loading of ballast (February 2008 to March 2013) = (I) + (II) = ₹4,07,42,613.5 + ₹5,98,83,417.25 = Rs.10,06,26,030.7 or ₹10.06 crore

The above replies are not acceptable because as per Para No.65 (2) of the Railways Act, 1989, payment of freight for carriage of ballast is made on the basis of weight of the consignment as recorded in the RR. Further, while replying to Audit in October 2013, NFR Administration had accepted the fact that the actual weight depicted in the RR is based on weighment sheet generated at weighbridge and freight was charged on the basis of chargeable weight as depicted in the RRs. As far as accumulation of rain water is concerned, it is stated that had there been no drainage system in open wagons, it would have an adverse impact on the track as well as hauling cost owing to the heavy weight of the accumulated rain water.

Thus due to contradictory provisions made in the contract agreement, Railways suffered a loss of ₹ 13.44 crore [excess payment of ₹ 3.38 crore (+) under recovery of freight of ₹10.06 crore] during the period February 2008 to March 2013.

3.6 *Northeast Frontier Railway (NFR): Non-disposal of surplus engineering stores*

Inefficient inventory management and non-compliance to prescribed procedure resulted in accumulation/ non-disposal of surplus engineering stores to the tune of ₹ 12.97 crore

As per Para No. 103 of the Indian Railway Code for the Stores Department, Volume I (1990 Revised Edition), all stocks of stores on hand, whether with the Stores Department or other departments of the Railway, represent funds that are not productive. Para No. 2219 of the Indian Railway code for the Stores Department, Volume II (1993 Edition) states that Dead Surplus comprises items of stores which have not been issued for the past 24 months and which it considers, are not likely to be utilized on any railway within the next two years. Para 2221 further stipulates that a Survey Committee should be formed on each Railway for the purpose of inspecting critically the condition of all the stores.

The gauge conversion of Katihar-Barsoi-Radhikapur (KIR-BOE-RDP, 88.61 Kms.) and Katihar-Jogbani (KIR-JBN,108.3 Kms.) from Metre Gauge (MG) to Broad Gauge (BG) lines were sanctioned in 2002-03. These projects were completed and opened for traffic in phases between February 2006 and June 2008.

During audit (March 2010 and February 2011) of Construction Organization/ Katihar, it was observed that even after completion of Jogbani-Katihar-Barsoi-Radhikapur and Katihar-Teznarayanpur sections in 2006 and 2008, a large quantity of material valuing ₹20.02 crore had been lying idle for the period 2008 to 2010. It was also observed that no stock verification was undertaken by the Stock Verifier[193] since 2007. During tri-partite[194] meeting (March 2012), NFR Administration had accepted that out of stores valuing ₹20.02 crore, the surplus stores of Katihar-

[193] As per Para 3302 of the Indian Railway code for the Stores Department, Volume-II, 1993, the duties of Stock Verifiers consist mainly in verifying stores and tools and plant as per books.

[194] Tri-partite meeting held (22 March 2012) between Deputy Chief Engineer, Construction (Katihar), Deputy Financial Adviser and Chief Accounts Officer, Construction (New Jalpaiguri) and Audit

Jogbani project is about ₹12.65 crore and the balance stores valuing ₹7.37 crore were handed over to different Railway organizations.

The matter was again brought to the notice of NFR Administration in July 2013, wherein it was pointed out that surplus engineering stores valuing ₹12.97 crore were lying unused from 2008 to 2013. In reply, NFR Administration stated (February 2014) that many items of stores particularly those manufactured for use of Railways only are purchased in bulk to take advantage of economic pricing. They also stated that the remaining materials are being used and may be used in running projects and Open Line etc.

The above reply is very general and not acceptable. The excess material was procured for projects completed and opened during February 2006 to June 2008 and was not utilized even in Katihar-Manihari and Aluabari-Siliguri Jn gauge conversion projects during 2011-12 i.e. within three to five years of the material becoming surplus. Due to procurement of material in bulk, depreciation of the procured items takes place. Moreover, NFR Administration has also admitted (February 2014) that due to non-availability of proper documents as well as detailed papers as required at the time of stock verification, no thorough stock verification had been undertaken since 2007.

Thus, due to inefficient inventory management and non-observance of codal procedures, surplus engineering stores valuing ₹12.97 crore during the period 2008 to 2013 have been accumulated by NFR, with no appropriate notification being made.

The matter was brought to the notice of Railway Board in February 2014; their reply has not been received (July 2014).

3.7 East Central Railway (ECR): Loss due to poor planning in Signaling works

Poor planning of signaling works related to Route Relay Interlocking System at Patna Junction of ECR led to delay of 10 years in project completion and avoidable loss of ₹9.65 crore on account of time and cost overrun

The East Central Railway Administration proposed (March 1999) the work of replacement of signaling gears by Route Relay Interlocking (RRI) system to enable handling high volume of train movements, maintain train movement continuity and improve the signaling system at Patna Junction, ECR. The work was sanctioned by Railway Board in October 1999.

Review of records by Audit revealed that the ECR Administration awarded (March 2001/ April 2001) contracts for the RRI system separately for Outdoor and Indoor works at the cost of ₹1.48 crore and ₹1.75 crore respectively. The completion period of both the contracts was 12 months. Audit, however, noticed that the Signal Installation Plan (SIP)/ Engineering Plan, required for both the Outdoor and Indoor works, was not prepared at the time of awarding the contracts. This was contrary to the Railway Board's instructions of August 1980, which was reiterated from time to time that contract for a work should be awarded only after the completion and approval of drawings etc. to avoid delay in execution of works.

Audit observed that for the contract of Indoor Work, ECR Administration granted three extensions up to December 2003 on account of delay in finalization of Engineering Plan and preparation of SIP. Finally, the contract was terminated (1st October 2003) due to no progress in the work. The contractor was, however, paid ₹0.09 crore for the material supplied. Meanwhile, in September 2003, Railway Board changed their policy and directed that the interlocking system provided would use metal to metal plug instead of metal to carbon. Audit further observed that ECR Administration awarded (June 2004) the Indoor work at ₹3.52 crore to another contractor with the changed specifications, again without the finalization of the SIP. However, the work could not be executed due to non-finalization of Engineering Plans/SIP and ECR Administration granted six extensions up to September 2007.

Similarly, in the case of the Outdoor work (awarded in March 2001), Audit observed that ECR Administration granted six extensions of target completion date up to June 2005 on Railways' Account as Engineering Plans/SIP could not be finalized by that time.

Audit noticed that the Engineering Plan was finalized only in November 2005 and the SIP was approved in March 2006. Scrutiny of records of the construction organization revealed that finalization of Engineering Plans/ SIP was delayed mainly due to modification of yard design a number of times. Thereafter, SIP was forwarded (June 2006) to the contractors i.e. after five years of the award of contracts.

Audit further noticed both the works (Indoor and Outdoor) could not be executed further and contractor had applied (December 2005, May 2006, July 2007) for closure of contracts due to long delay and increase in cost of material. Consequently, ECR Administration had short closed (April 2008) both the contracts on 'as is where is basis' giving the reason that the works were at a stand-still for more than two years. It was observed that ECR Administration made payments of ₹3.14 crore and ₹1.24 crore to the contractors for materials supplied in respect of Indoor and Outdoor works respectively.

Subsequently, ECR Administration decided to call fresh composite tender for completing the balance works. Accordingly, the contract for the left over works was awarded (September 2008) as a Special Limited Tender on the ground of urgency at a cost of ₹7.08 crore (Revised value - ₹8.41 crore). The date of completion of the contract was July 2009. However, it was seen that the work was completed in March 2012 i.e. after 40 months instead of the scheduled time of 10 months at a cost of ₹8.41 crore. This delay defeated the purpose of ECR Administration in awarding the contract on a Special Limited Tender[195] on urgency basis.

As such, ECR Administration took almost 10 years to complete the RRI work at Patna Junction with a cost overrun of ₹9.65[196] crore (about 300 *per cent* of the original cost of ₹3.23 crore).

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[195] Special Limited Tender for a project is called on emergency basis on approval of General Manager after the Finance concurrence.

[196] Total payment made for the work = ₹12.88 crore (0.09+3.14+1.24+8.41)

The matter was brought to the notice of ECR Administration in March 2013. In reply, they stated (July 2013) that the work was delayed as the associated Engineering and Electrical works, involving both construction as well as open line, could not be completed. They further added that the delay in execution of work will reflect in the increased life span of the asset for 10 years more as the codal life of installation is taken from the date of commissioning.

The ECR Administration instead of taking steps to improve their system of contract management, have merely accepted the substantial cost overrun due to delay in construction of a crucial signalling work. This also delayed the achievement of objectives of handling high volume of train movement, maintaining train movement continuity and improving the signaling system by nine years as against the scheduled completion period of one year. Besides, justifying the delay with increased life span of the asset shows the casual approach of ECR Administration towards timely planning and completion of project as shelf life of the project is not increased with delay in completion of the work.

The matter was brought to the notice of Railway Board in June 2014; their reply has not been received (July 2014).

3.8 South Western Railway (SWR): Avoidable payment of excess compensation for land acquisition

Casual approach of SWR Administration in following the land acquisition procedures and delayed payment of compensation to the land owners resulted in extra expenditure of ₹ 6.92 crore for land acquisition which was not justified

Construction Organisation, Bangalore Cantonment (CNBNC) planned (1982) to take up construction of goods platform at Yelahanka Railway station[197] as a part of Bangalore-Guntakal Gauge Conversion project and complete the construction of goods platform latest by January 1983. This necessitated urgent acquisition of land. As such, Railway Administration (SWRA) approached (1982) the Special Land Acquisition Officer, Bangalore (SLAO) who issued notification (June 1983) under Section 4 (1) & 17 (1) of the Land Acquisition Act 1894 for acquiring 5 acres 13.25 gunta[198] of land from 12 different land owners. The notification however was vitiated[199] due to discrepancy in survey numbers and delay in the deposit of initial installment of ₹0.50 lakh by CNBNC with SLAO. The SLAO issued another notification (July 1986) which also was vitiated as CNBNC Authority could not complete in prescribed period the acquisition proceedings including deposit of 50 *per cent* cost of land to be acquired (₹8.50 lakh). The Railway had however taken the possession of the land in 1982.

Land owners served a legal notice to SWRA (October 2006) for payment of compensation towards their land stated to be in the possession of the Railway. As

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Cost of work as per original plan ₹03.23 crore (1.48+1.75)
Excess expenditure ₹9.65 crore

[197] Between existing Meter Gauge (MG) and Narrow Gauge (NG) lines on Hindupur end

[198] Gunta is a unit for measuring area of land. One gunta is 1/40th part of an acre i.e. 33 feet x 33 feet= 1089 square feet.

[199] Made invalid and ineffectual

Railway Administration had not deposited any amount with the SLAO, Divisional Railway manager (Works), Bangalore Division advised the land owners to approach SLAO for payment. As a consequence, the land owners filed a writ petition (June 2007) in the Honourable High Court of Karnataka which directed SLAO to consider within three months the legal notice of the land owners. In view of High Court's directives to pay the compensation within three months, the SLAO advised CNBNC Authority (October 2007) to check the status of land under reference as compensation would be payable to land owners with interest from the date of acquisition of land in case the land was in possession of the Railway. However, CNBNC took no action in this regard. As a result, the Land owners filed another writ petition (October 2008). The Court directed (August 2009) the SLAO and SWRA (i) to have the land surveyed within four weeks and (ii) to pay the compensation within six months if the land had been taken over and utilized.

Despite issue of two reminders by SLAO (July 2009 & November 2009) to SWRA bringing out consequences of contempt proceedings, the SWRA did not act. In the absence of any response of SWRA the Land owners filed (March 2010) a contempt of Court petition. The contempt petition was disposed off by the Honourable High Court of Karnataka (December 2010) directing Railway to deposit the compensation with the SLAO within two months and complete the acquisition process within six months. Railway deposited (August 2011) with the SLAO a sum of ₹7.09 crore towards compensation. The SLAO issued (July 2012 & March 2013) fresh notifications[200] for the authentication of acquired land. Audit observed that Railway's possession of land had not been legalised as yet (April 2014).

In this connection, scrutiny further revealed that in 1982, neither any goods shed existed in Yalahanka nor was any planned for construction in the near future. However, SWRA proposed construction of a goods platform there and had taken physical possession of the land 31 years ago. Despite physical possession of the land, SWRA did not take any action to get the possession legalised by paying compensation to land owners totalling ₹0.17 crore approximately only. As a result, Railway had to pay avoidable additional payment as compensation amounting to ₹6.92 crore besides legal consequences.

In their reply, Divisional Authority[201], Bangalore accepted (April 2013) that land acquisition proceedings were not completed by the SLAO in 1982 due to non-deposit of the initial instalment of ₹0.50 lakh by the CNBNC Authority. This ultimately resulted in contempt of court and higher payment of compensation. He stated that the acquired land would be used for construction of Parcel siding.

The contention of the SWRA is not acceptable. Scrutiny of records by Audit revealed that SWRA does not have (up to September 2013) any proposal for the construction of a Parcel siding at Yelahanka. Further, though this land has been in the possession of Railway for a considerable period, it has not been utilised so far. In fact, Yelahanka is a wayside station and the acquired land lies between two

[200] Notification 4(1) in July 2012 and Notification 6(1) in March 2013
[201] Senior Divisional Engineer (co-ordination)

tracks. Moreover, Railway has around 109.02 acres of vacant land in and around Bangalore out of which 2.49 acres of land is available at Yelahanka itself.

Thus, due to casual approach in following the land acquisition procedures and delay in payment of compensation to the land owners, Railway Administration has incurred extra expenditure of ₹6.92 crore for land acquisition which was not justified.

The matter was brought to the notice of Railway Board in May 2014; their reply has not been received (July 2014).

3.9 North Western: Railway (NWR) — Unproductive expenditure on creation of an asset with negligible utilization

Failure of NWR Administration to assess the viability of a new line project resulted in unproductive expenditure of ₹133.69 crore on construction of Ajmer-Pushkar new Railway line besides incurring an operating loss of ₹2.60 crore

As per Para No. 204 of the Indian Railway Financial Code, Volume I (1998), investment on a new line project will be financially viable if the average annual cost of service yields a return of not less than 14 *per cent*.

Ministry of Railways (Railway Board) sanctioned (July 1998) a Reconnaissance Engineering cum Traffic survey for the new Broad Gauge rail line between Ajmer-Pushkar. The cost of the project was initially assessed as ₹69.87 crore with Internal Rate of Return (IRR) of (-) 3.40 *per cent* and the project was planned to be completed in five years. The Detailed Estimate was sanctioned in September 2003 with a cost of ₹88.40 crore. NWR Administration, however, started the work for construction of the new line in December 2005 i.e. after two years of sanction due to delay in carrying out field survey, non-availability of land, non-handing over of site, etc. The work of the new line was completed in December 2010 and sanction of Commissioner of Railway Safety (CRS) was accorded for opening for passenger traffic in May 2011. A total of ₹133.69 crore was incurred by the NWR Administration on the construction of this new line.

Review by Audit (January/ February 2012) revealed the following:

- Contrary to the norms laid down in its Indian Railway Financial Code, Volume-I, the Ministry of Railways approved the new line (Ajmer-Pushkar) project which was financially unviable as the IRR was negative at the time of initial assessment. The project was approved on the ground that the projected rail link would help pilgrims coming from Western India to reach Pushkar directly by the shorter route.
- One pair of passenger trains (Ajmer-Pushkar-Ajmer), plying five days in a week, was introduced via Maldar, Makarwali, Budha Pushkar with effect from 23 January 2012 i.e. after a delay of around eight months from the approval of Commissioner of Railway Safety (CRS) for opening passenger traffic.
- During the period from January 2012 to March 2014, the actual earnings from this passenger trains (Ajmer-Pushkar-Ajmer) was only ₹0.05 crore against the operating expenses of ₹2.65 crore during the same period (January 2012 to March 2014). As such NWR had to incur an operating loss of ₹2.60 crore in operating of this new line.

- The traffic survey (July 1998) of the project had assessed gross earnings from passenger traffic for the Ist, 5th and 10th year of the project as ₹1.39 crore, ₹1.45 crore and ₹1.52 crore respectively. However, the actual earning was only ₹0.05 crore during the period January 2012 to March 2014 i.e. only 3.60 *per cent* of the first year's projected earnings.
- The average occupancy during the period January 2012 to March 2014 remained around six *per cent* only for an investment of ₹133.69 crore.

Audit observed further that the distance by the new rail line between Ajmer and Purshkar is 32.30 Km while by road this distance is only 15 km. Moreover, the time taken by road to cover this distance is between 30 to 40 minutes while by train, it takes 80 minutes and the fare both by train and road is the same. Thus, this new rail link offers a poor connectivity in comparison to road link both in terms of time and distance.

When the matter was brought to the notice of NWR Administration in June 2013, they stated (March 2014) that it is a new section and will take time for patronization. The earning of the section will increase as and when long distance trains are introduced. They further stated that introduction of new services in this section will definitely provide a fillip to carrying people and creating opportunities for faster development in Pushkar Ghati area.

The above reply is not acceptable. In the instant case, both the factors viz., absence of a long distance train and low frequency of trains were known to NWR Administration. Further, no details/ plan related to augmentation of train services in Pushkar Ghati area was provided by NWR Administration in support of their contention. Moreover, the new rail line has not served the purpose of helping pilgrims coming from Western India to reach Pushkar as the average train occupancy was only around six *per cent* during January 2012 to March 2014.

Thus, the investment of ₹133.69 crore on construction of the new line (Ajmer-Pushkar) was financially not justifiable. Besides, NWR incurred an operating loss of ₹2.60 crore during January 2012 to March 2014 in operation of the passenger train (Ajmer-Pushkar-Ajmer) on the new line.

The matter was brought to the notice of Railway Board in February 2014; their reply has not been received (July 2014).

Chapter 4 – Electrical – Signalling and Telecommunication units

The Electrical department is responsible for safe train operations and maximizing the utilization of fixed and moving assets such as train rakes, locos and tracks etc. At Railway Board level, the Electrical Department is headed by Member (Electrical) who is assisted by three Additional Members for Electrical, Telecommunication and Signalling.

At Zonal level, the Electrical Department is headed by Chief Electrical Engineer who is responsible for Operation and maintenance of Electric Locos, EMU, MEMU, Overhead Head Electrical Equipment (OHE) its Maintenance and operation, Planning, Electrical Coaching stock operation & maintenance and Electrical general power supply, Air conditioning, Diesel Generating set operation and maintenance and Water supply. The Signalling & Telecommunication department is headed by Chief Signal & Telecommunication Engineer (CSTE) who is responsible for maintenance of signaling assets.

The total expenditure of the Electrical Department during the year 2012-13 was ₹60350.51 crore. During the year, apart from regular audit of vouchers and tenders etc., 589 offices of Electrical and Signalling & Telecommunication department of Railways were inspected by Audit.

This chapter includes one individual paragraph pertaining to Southern Railway regarding avoidable payment of low power factor surcharge due to non-provision of essential equipments in Traction Sub-stations. In this para, Audit commented on Railway Administration's failure to follow mandatory advice of the State Electricity Board for replacement of fixed capacitors by Dynamic Reactive Power Compensation equipments to regulate low power factor which resulted in avoidable payment of surcharge.

4.1 Southern Railway (SR): Avoidable payment of low power factor surcharge due to non-provision of essential equipments in Traction Sub-stations

Failure of SR Administration to comply with the statutory regulation of Tamil Nadu Electricity Board for providing proper power control equipment led to payment of surcharge and compensation totalling to ₹ 9.77 crore during 2010-13 which is of recurring nature

For running electric trains and Electric Multiple Units (EMUs)[202], SR Administration purchases single phase electricity supply of 110 kilo Volt (kV) electric potential from Tamil Nadu Electricity Board (TNEB). The electricity supply is transmitted by TNEB at Railway's twenty three Traction Substations[203] (TSSs) through their high tension lines. The electricity potential of the supply received from TNEB is stepped down to 25 KV at TSSs. This power supply of reduced electricity potential is fed to Electric Overhead Equipments (OHE) provided over the Railway tracks. The locomotives of trains/ EMUs get power supply of 25 KV from the overhead lines. Each TSS feeds OHE over railway tracks for a distance of about 30 km on either side.

Power factor is the ratio of real power[204] to the apparent power[205]. Power factor is required to be controlled and kept at minimum prescribed limit by the consumers. When traffic load on railway track is low or nil, consumption of electricity stored in overhead wires is less which increases the power factor. Higher/ uncontrolled power factor on account of high/ fluctuating electric potential of electricity affects adversely the transmission lines/equipments of State Electricity Board. For maintaining the Power factor at prescribed limit Railway uses capacitors in TSS.

Tamil Nadu Electricity Board (TNEB) supplies single phase power supply of 110 KV at twenty three Traction Substations[206] (TSSs) over Southern Railway. The electricity supplied is stepped down to 25 KV at TSSs and fed to the overhead traction conductors provided above the track. The locomotives/ Electric Multiple Units (EMUs) get power supply at 25 KV from the overhead lines. The tariff of TNEB stipulates that all High Tension (HT) electricity consumers should control power factor[207] and the average power factor[208] should not fall below 0.9 lag[209]. If

[202] Trains having special types of coaches to facilitate sub-urban traffic
[203] Railway's Units along the track for receipt and distribution of electricity supply.
[204] The real power is actual power being used in a circuit.
[205] The Apparent power is combination of real power and reactive power. The reactive power is the portion of power which returns to the source due to inductive reactance on account of its storage at consumer's end.
[206] Units along the track where high voltage electricity is received by the Railway from State Electricity Boards and fed to Overhead equipments after stepping down the voltage
[207] Ratio of real power to the apparent power
[208] The ratio of total Kilo Watt hours to the total Kilo Volt Ampere hours consumed during the billing months

it falls below the prescribed limit the customers are liable to pay surcharge towards compensation for power factor. SR Administration had installed fixed Capacitors at TSSs to maintain power factor. Non-controlling of power factor damages the transmission lines/equipment of State Electricity Board due to high voltage.

TNEB changed (January 2005) the method for computing power factor by replacing the existing 'lag only' logic criteria by 'lag + lead[210]' logic criteria which would actually reduce line loss and damage of transmission line/ equipments besides distribution of electricity in an efficient and economical manner. This required mandatory provision of automatic power factor correction equipment called Dynamic Reactive Power Compensation equipment (DRPC) at TSSs at an estimated cost of ₹ 24 crore.

Although the provision made by TNEB for the installation of DRPCs at TSSs was statutory obligation, SR Administration appealed (2006) to the Tamil Nadu Electricity Regulatory Commission (TNERC) to exempt them from the implementation of the systems as the cost involved in the provision of DRPCs was very high. TNERC did not accept SR Administration's appeal but directed (April 2007) TNEB to defer the issue for three years (2007-08 to 2009-10) and advised SR Administration to install DRPCs of suitable specifications within that period.

Southern Railway Administration initiated action (2007-08) to install DRPCs of RDSO[211] specification and installed DRPC at Bommidi (June 2009) and Tambaram (February 2010) TSSs at a total cost of ₹ 4.71 crore. After installation of DRPC they noticed (July 2009) that in comparison to existing capacitor, the energy consumption at DRPC was on the higher side[212] as DRPC controls 'lag + lead' situation instead of only 'lag' situation by the fixed capacitor. SR Administration discontinued the installation of DRPCs as in their view the benefit from DRPCs did not match the cost involved. Simultaneously, they approached TNERC twice (2009) and Appellate Tribunal once (2010) with their earlier request.

Southern Railway Administration was, however, not successful in producing before the TNERC (2009) and Appellate Tribunal (2010) any authentic data to substantiate the adverse impact of new logic on the traction system which was resulting in overall energy loss. On the other hand, TNEB proved before the Appellate Tribunal (2010) that the Railway Administration had not studied the total energy loss in the system and the energy consumption had come down in Tambaram and Bommidi TSSs after the installation of DRPCs. They established that the new logic was beneficial due to avoidance of line loss, damage in transmission lines/ equipment on account of over voltage and due to maintenance of distribution system efficiently and economically.

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[209] Lag relates to inductive reactance (When the load is inductive, the inductance tends to oppose the flow of current, storing energy and then releasing it later in cycle. The current waveform lags behind the voltage waveform.)

[210] Lead relates to capacitive reactance (when the load is capacitive, the activity opposite to lag occurs i.e. current waveform leads the voltage waveform)

[211] Research, Design and Standard Organisation

[212] 1100 units per day by DRPC and 80 units per day by fixed capacitor

As a result, the Tribunal observed (November 2011) that Southern Railway, being a Government Organisation, had to act as a role model by obeying statutory obligation towards introduction of new logic as it would improve the quality of supplied power.

Since SR Administration did not provide DRPCs at 21 TSSs up to March 2010 as directed by the TNERC, TNEB started (April 2010) to levy surcharge considering power factor based on new logic criteria. Railway, however, provided (2009 to 2011) as a low cost solution, auxiliary capacitors and automatic switching equipment at moderately loaded TSSs[213] in Salem and Chennai Divisions which controlled power factor to some extent. At eight TSSs which were either highly or moderately loaded, power fluctuation was under control and no surcharge was leviable. However, SR Administration paid surcharge levied by TNEB in respect of 13 lightly loaded TSSs[214] where power factor had been low due to uncontrolled power fluctuations.

During 2010-13, SR Administration paid surcharge totalling ₹ 9.77 crore in respect of thirteen TSSs including substantial compensation of ₹ 7.48 Crore paid for four TSSs[215] in respect of which no financial analysis was carried out. The payment is of recurring nature and would continue till the fulfilment of mandatory requirement.

When the matter was taken up with the Railway Administration in May 2013, they stated (September 2013) that-

- TNEB did not provide any proof that DRPC resulted in reduced losses.
- Fixed capacitor bank met the system requirement.
- TNEB did not prove that fixed capacitor was causing a higher voltage in the system and that implication of DRPC would improve the overall voltage profile of the gird in more economical and efficient manner.

Railway's contentions are not acceptable in view of the facts that-

- TNEB furnished a comparative statement of actual readings for energy consumed by the Railway at Bommidi TSS in 2009-10 before and after installation of DRPC to support their claim that provision of DRPC results in reduced losses[216]. Although Railway stated that the energy loss in DRPC was much higher than energy loss in fixed capacitor they could not substantiate their claim that provision of DRPC resulted in increase in system losses[217].
- RDSO had viewed (March 2009) that if traction load varies rapidly there are practical limitations of using fixed High Tension capacitors of higher size/ ratings for achieving near unity power factor. It is evident from the reading at ten lightly loaded TSSs that fixed capacitors cannot meet the system requirements.

[213] TSS feeding a station where number of trains running in the section on electric traction is moderate
[214] TSS feeding a station where running of trains on electric traction is less in the section
[215] Vridachalam, Ariyalur, Vaiyampatti and Tiruchi
[216] Judgement of Appellate Tribunal (Paragraph No.33)
[217] Judgement of Appellate Tribunal (Paragraph No. 35)

- The findings of the Appellate Tribunal were that DRPC is one of the techniques to improve the quality of power due to poor voltage regulation on account of wide variation of load in a very short duration of time[218].

Southern Railway Administration purchases electricity from State Electricity Board which is empowered to make applicable laws/ rules and therefore it is mandatory for the Railway Administration to follow their directives. Further, Railway's appeal has been heard and disposed off in quasi judicial bodies[219]. Moreover, while SR Administration was still paying surcharge for low power factor due to non-provision of DRPCs, other Zonal Railways had installed[220] in their TSSs[221] the DRPCs of RDSO specification. In fact, instead of complying with the statutory regulation of TNEB for providing proper power control equipment, SR Administration opted to pay surcharge as compensation/ penalty which will be an avoidable recurring expenditure.

The matter was brought to the notice of Railway Board in May 2014; their reply has not been received (July 2014).

[218] Judgement of Appellate Tribunal (Paragraph No.37)
[219] Tamil Nadu Electricity Regulatory Commission and Appellate Tribunal
[220] Judgement of Appellate Tribunal (Paragraph No.36)
[221] Such as Lasagoan, Pimperkeda, Nagpur, Bhadii, Maxsi and Mohamed Keda, as mentioned in Judgement of Appellate Tribunal (Paragraph No.36)

Chapter 5 – Mechanical – Zonal Hqrs/Workshops/ Production units

The Mechanical Department is mainly responsible for management of –

- Train operations by ensuring Motive Power availability, Crew Management, Rolling Stock Management and Traffic restoration in case of accidents
- Workshops set up for repair, maintenance and manufacturing of rolling stock and related components
- Production Units engaged in production of Locomotives, Coaches, Wheel sets, etc

The Mechanical Department is headed by Member Mechanical at Railway Board who is assisted by Additional Members/ Advisor for Mechanical Engineering, Production Units and Rolling Stock/ Stores.

At Zonal level, the Department is headed by a Chief Mechanical Engineer (CME) who reports to the General Manager of the concerned Railway. The office of the Member Mechanical of the Railway Board guides the CME on technical matters and policy. At the divisional level, Sr. Divisional Mechanical Engineers are responsible for implementation of the policies framed by Railway Board and Zonal Railways. The Workshops are headed by Chief Works Managers and report to the CME of the concern Zone. Production Units are managed independently by General Managers reporting to the Railway Board.

The total expenditure of the Mechanical Department during the year 2012-13 was ₹ 25368.76 crore. During the year, apart from regular audit of vouchers and tenders etc., 763 offices of Mechanical Department were inspected.

The chapter includes three long paragraphs viz., 'Management of Scrap in Indian Railways', 'Working of Integral Coach Factory, Perambur, Chennai' and 'Working of Rail Wheel Factory, Yelahanka, Bangalore'.

Scrap Management in Indian Railways: Audit revealed that there was no time frame fixed by the Railways for scrap identification and its disposal. Audit observed that the system of assessment, retrieval and disposal of scrap and the monitoring mechanism in place was deficient and delays at various levels enhanced the risk of deterioration of scrap, decrease in value and theft and pilferages.

Working of Integral Coach Factory, Perambur, Chennai: Integral Coach Factory is a premier coach production unit of Indian Railways. Audit revealed that there were regular delays in finalization of Annual Production Programmes both at unit and Railway Board level. This adversely affected the production of heavy build coaches and timely availability of coaching stock.

Working of Rail Wheel Factory, Yelahanka, Bangalore: Rail Wheel Factory is engaged in the production of wheels, axles and wheel sets. Audit revealed that Rail Wheel Factory focused primarily on achieving/ exceeding the annual production targets fixed by Railway Board without reference to actual requirement of types of wheels as allotted by Wheel Tyre Axle (WTA) allotment meeting. This lack of synchronization between its WTA allotments and production resulted in stock piling of inventory of certain types of wheels.

5.1 Management of Scrap in Indian Railways

5.1.1 Introduction

Scrap can be defined as the material no longer useful to the Railways for the purpose it was originally purchased or obtained. It consists of condemned rolling stock (loco, wagon and coach), released Permanent Way materials declared unserviceable, unserviceable material generated in workshops, maintenance depots and scrap generated in Productions Units. The process of scrap disposal includes timely identification and collection of scrap from scrap originating points, lot formation in economic quantity of a particular item of scrap, its valuation and sale. Regular and expeditious sale of scrap is essential, not only to fetch the best price possible, but also to avoid unnecessary accumulation, theft and pilferage. Delay in declaring and disposal of scrap leads to its deterioration and reduction in its value.

In Indian Railway, there are 17 Zones (68 divisions), 42 workshops, 144 sheds (93 diesel loco sheds and 51 electric loco sheds) and 6 Production Units. In course of operation of these units, a huge quantity of scrap is generated. During the year 2012-13, Indian Railways sold scrap worth ₹ 3533.59 crore. Sources of generation of scrap and its disposal in IR are shown in ***Appendix I.***

At Railway Board level, the Stores Directorate headed by Member Mechanical is responsible for policy issues related to scrap. At Zonal/Production Units level Controller of Stores (COS) is responsible for arranging regular collection of scrap at convenient places from user departments[222] and sale of scrap. Financial Advisor & Chief Accounts Officer (FA&CAO) monitors proper accountal and disposal of scrap. At Divisional level the Divisional Railway Manager (DRM) is assisted by Divisional Officers of user departments regarding offering of scrap for sale and its disposal.

The Performance Audit No. 8 of 2008 (Railways) highlighted the results of review of Scrap Management in Indian Railways, wherein issues regarding shortfall in realization of Permanent Way scrap against estimated quantities, inadequacies in assessment of weight of scrap leading to short accountal, delays in disposal of scrap, non-clearance of debits/ credit balances from Scrap Sale Suspense Account, delays in writing back adjustment for condemned rolling stock etc were highlighted. The need to evolve an adequate procedure to assess arising of scrap for fixation of targets for collection and facilities for proper weighment at sender's point and accountal in store depot was stressed upon. In the present audit, it was seen that, most of these issues continue to persist. These are discussed in Para 5.1.2 below.

The main aim of the study was thus to see whether the released materials[223] were efficiently identified to avoid deterioration, scrap was disposed off timely with minimum delay in a transparent manner and that there was an internal control mechanism in place to monitor the same.

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[222] Four departments viz. Engineering, Mechanical, Electrical, Signal & Telecommunication are the main user departments

[223] Materials released in manufacturing or maintenance activities of Railways and dead surplus store items

The provisions prescribed in various codes and manuals[224] and guidelines and instructions issued by the Railway Board were the main audit criteria. The issues reviewed in audit included identification, collection and sale of scrap relating to Permanent Way Material (mainly rails), wagons, coaches, locos (including trolleys, wheels and axles) and store items in selected workshops, divisions, construction organization and store depots for the period 2010-11 to 2012-13.

The details of sample selected and reviewed are given at ***Appendix II***.

5.1.2 Audit Findings

5.1.2.1 Planning

Scrap consist of Dead Surplus of Store Depot; Permanent Way material released during CTR/TRR/GC[225] works and other regular track maintenance works, and rolling stock condemned by Mechanical or Electrical department. Para 2402 of IRSC provides that a detailed and unified schedule of scrap items should be maintained by each Zonal Administration. In preparing the schedule the use to which the material could be put by the likely purchasers should be kept in view, so that the items may fetch a reasonable price in the auction sales. Scrap of different metals and alloys should be scheduled as far as possible under separate main headings, with suitable sub-headings describing the form in which the material is put up for sale.

Each Zone is required to intimate the quantity of expected scrap generation to Railway Board. Railway Board fixes targets (in terms of value) for sale of scrap for each Zone on the basis of expected scrap generation of respective Zones ***(Annexure II).***

Audit examination of targets of sale of scrap revealed that:

- The Railway Board revised the targets for sale of scrap of each zone after mid-term review of expected scrap generation. The targets were revised in at least 12 Zones and 2 Production Units in all the three years. Revision of targets of scrap sale was made both in the upward and downward direction after giving due consideration to the requests of Zonal Railways.
- The Zones generally achieved the final targets fixed. The achievement over and above the targets ranged up to 39.86 *per cent* in 2010-11 (ECoR), 33.25 *per cent* in 2011-12 (WCR) and 23 *per cent* in 2012-13 (MR). The main reasons for achievement over and above targets as given by railways were more scrap generation than estimated and/or increase in price of scrap. Results of audit check as discussed in Para 5.1.2.2.1 also revealed that estimation of scrap generation was not done properly, which was resulting in generation of more scrap than estimated.
- Percentage of shortfall ranged up to 27.3 *per cent* in 2010-11 (NCR) and 15.14 *per cent* in 2012-13 (WR). The only Zone with shortfall in 2011-12 was SECR (11.25 *per cent*). The reasons for such shortfall were less arising of scrap, less

[224] Indian Railway Code for Stores Department (IRSC), Indian Railway Accounts Code, Indian Railway Financial Code-Vol. I, Indian Railway Mechanical Code

[225] Complete track Renewal /Thorough Rail Renewal/Gauge Conversion

offering of scrap materials to Stores Department for disposal and rejection by auctioning authority as the quoted price was less than the Reserve Price. Results of audit check as discussed in Paras 5.1.2.2., 5.1.2.3, 5.1.2.4.3 also showed that there were delays at various stages from identification to collection and disposal of scrap.

- In Production Units, achievement over and above targets ranged from 42.46 *per cent* to 62.02 *per cent* in DLW, Varanasi during the period of review.

As the targets for sale of scrap were fixed only in terms of value and not quantity and the price of sale of scrap varied in different Zones, fixation of targets and assessing achievement vis-à-vis these targets did not provide a uniform basis of comparison. However, higher achievement over and above targets indicated that fixation of targets on the basis of expected generation was not realistic.

5.1.2.2 Identification of Scrap

Para 2401of IRSC defines scrap as material of different kinds no longer useful for the purpose for which it was originally procured. It should be distinguished from other stores and component parts which can be utilised after repair or renovation. Occasionally scrap may consist of second-hand or even new material which the Railways cannot consume themselves. These stores may be in a state of excellent repair and command a fair price in the market not associated with scrap. Therefore, proper identification of scrap available from different sources is necessary.

5.1.2.2.1 Scrap is generated during Complete Track Renewal (CTR), Thorough Rail Renewal (TRR) or Gauge Conversion (GC) works. During preparation of estimate of CTR/TRR and GC work, the projected released materials should tally with the actual release of materials after completion of the work. Para 320 (4) of Permanent Way Manual provides that identification of scrap of Permanent Way material should be done during foot survey and actual observations recorded jointly by PWI[226] and ISA[227]/Stock Verifier. Over-aged and under-aged rolling stock is condemned on age-cum-condition basis. Rolling stock is identified as scrap after it is condemned by competent authority i.e. Chief Mechanical Engineer/Chief Electrical Engineer or Railway Board as the case may be.

Audit reviewed records of 32 CTR works, 33 TRR work and 13 Gauge Conversion works completed during the period 2010-13 over all the Zones ***(Annexure III)*** to compare the estimated scrap arisings with the scarp actually generated. It was observed that

- The scrap released varied substantially against the expected generation in all the Zones.
- Only in 13 works (18 *per cent*) out of 78, the actual released material matched with the projected figures.
- In the remaining 65 works there was either an excess or shortage of actual released material as compared to estimated released material.

[226] Permanent Way Inspector presently designated as Section Engineer (P Way)
[227] Inspector of Store Accounts

- In 40 works there were shortfalls against the estimated quantities of rails.
- In 23 works there were excesses against the quantities projected.
- In two cases, the account for released material was yet to be given by the contractor.

- In CTR works, a maximum shortage of 984 MT was noticed in SER[228] and a maximum excess of 898.63 MT was noticed in SECR[229].
- In TRR works, a maximum shortage of 1977 MT was found in SWR[230] and maximum excess of 572.526 MT was found in ER[231].
- In GC works, a maximum shortage of 2304.006 MT was found in SR[232] and a maximum excess of 1742.081 MT in SECR[233].
- Incorrect estimation of the scope of work to be done and incorrect estimation of type of released material were the two main reasons which resulted in incorrect estimation of released material in 25 (32 *per cent*) of the 78 works reviewed in audit.

A few interesting cases of excess/shortfall in actual vis-à-vis estimated released material noticed are discussed below:

- In SCR, in respect of GC work of Dharmavaram-Pakala section the actual release of scrap from the work was more than the projected scrap by 1082.33 MT valuing ₹ 1.80 crore. Audit observed that quantity of 52 kg and 90 R rails[234] were not taken into account while estimating the scrap of the GC work.
- In SR, in case of TRR-P[235] for 6.042 KMs between 'Chennai-Arakkonam', it was estimated that 52 kg rails would be released i.e. rails for which weight of 1 meter of rail is 52 kg. Instead, 60 kg rails were released i.e. rails for which weight of 1 meter of rail is 60 kg. This indicated non-compliance of general procedure of estimation.
- In SER, when the Gauge Conversion work of Rupsa-Bangriposi (90 kms) was taken up, the train movement was suspended in 2001 in Bhanjpur-Bangriposi (34 kms) narrow gauge section. The work was started after six years (April 2007) and completed during 2009-10. It was observed that as against estimated released rails of 68000 meters, only 52786.29 meters of rails were released as seen from the records of Construction Department. Joint Inspection of railway lines between Bhanjpur-Bangriposi (34 kms) by PWI and Inspector of Stores Accounts/stock verifier revealed that another 10016.97 meter rails were stolen before the lines were dismantled by the contractor. Though theft report was lodged with RPF, Balasore in 2008, it was not accepted by RPF on

[228] Km 243.22-252.60(UP) Km 245.22- 254.16(DN) between Salgajhari-Adityapurand Km 260/4-260 18 Dn Main line in Gamharia Yard
[229] Est. No. 16/R/09(Revenue 89/R/10)
[230] Mysore Division –TRR(S) of existing 90 R for length of 24.35 Km
[231] TRR(P) on UP/CCR line between DDI-RCD
[232] GC between VM-KPD-161 KM
[233] Est. No. Pt-I- 01/G-BTC/GC/99(Rev. G-BTC/GCE-2010)
[234] 52 kgs rails mean weight of 1 m rails is 52 kgs, 90R rails mean weight of 1 m rail is 90 pounds
[235] Thorough Rail Renewal (Primary) abbreviated as TRR(P) where only new materials are used

the ground that the missing rails were found to be very old and it could not be ascertained as to when the rails went missing. Thus, delay in finalizing a contractor for completion of Gauge Conversion work after suspension of train movement, led to theft and non accountal of 15213.71 meter (359.65 MT) rails amounting to probable loss of ₹ 0.94 crore[236].

- During inspection by audit in SER (August 2013) old and unusable stock of new (2851 nos bearing plate) and second hand (1134.26 meter of 90R rail) material were lying at Section Engineer (Permanent way), Sini office in Chakradharpur Division since 2000 and 2009 respectively. These were yet to be identified for disposal.

5.1.2.2.2 Para of 2219 of the IRSC classifies store items as "Dead Surplus" only if, (i) they have not been issued for a period of 24 months and are also not likely to be utilized on any Railway within the next two years, and, (ii) have been duly inspected and declared Surplus by a Survey Committee. Such items of stores may be surveyed, reclassified and promptly disposed off. The position of non-moving items over of 36 months[237] as of 31 March 2013 over 40 Scrap Yards/ Stores Depot of Indian Railways was reviewed. It was observed that 3714 surplus store items valuing ₹ 37.98 crore had not moved over 36 months from the depot.

- Out of 3714 surplus items, for 3005 items valuing ₹27.24 crore, no Survey Committee had been formed (March 2013).
- Only in case of 709 items, the Survey Committee formed with members from user department, stores department and account department had declared only 60 items, valuing ₹0.48 crore as scrap. In respect of 70 items (NR-60, NER-2 and SER-8) the cases were under process with the Survey Committee. In respect of 67 items, the Survey Committee had done verification, but alternative uses of these items were being explored before declaring them as scarp. In remaining 512 items the Survey Committees were yet to take a decision.
- In Railway Coach Factory (RCF), Kapurthala (September 2013) it was seen that surplus stores valuing ₹23 crore were generated either due to change in design, specification or due to change in the Production Programme till date (March 2013). These stores items had not been surveyed by a Survey Committee during the last three years.

Wide variations in actual release of rails as compared to estimated projections indicated that the estimates were not prepared as per the field/track conditions and by following the laid down procedure of foot survey. Release of less scrap than that estimated indicates a high risk of theft/pilferage and resulting in the loss of revenue. Also there were delays in survey of surplus stores and non declaration of non moving items. These were indicative of deficiencies in the system of identification of scrap from various track works and in stores depots.

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[236] @ ₹ 26,000/-per MT

[237] Allowing another 12 months time for completion of survey

5.1.2.3 Collection of scrap by Stores Department

Store items and condemned rolling stock identified as scrap are collected from store depots and sent to scrap yards for further disposal. Permanent Way scrap is kept in convenient places i.e. rails are kept beside the railway lines and switches, fastenings kept in PWI store. Para 1601 and 1539 of IRSC stipulates that stores identified as scrap may be sent to designated Stores Depot through Advice Notes for final disposal. Care should be taken to reconcile the quantities returned through Advice Notes at the depot.

Audit examination of Advice Notes at 39 depots revealed that:

- In 18 Depots[238] 206.311 MT and 1567 Nos. of store items were received with shortages valuing ₹ 0.68 crore.
- In five[239] Zones, shortages occurred due to wrong weight assessment by the consignor and non-availability/in-adequate availability of weighing facilities at the consignor end. Where weighing facilities were not available, the weight was being arrived at on the basis of visual inspection and approximation. This increased the risk of pilferage/theft of the material on the way to the Store Depot.
- In SER, one Store Depot informed that due to non-availability of weighing machine at Workshop, the scrap material was being sent with a blank Advice Note, which is filled at the Depot, where weighing facility is available. In SR, at one[240] Store Depot, quantity of returned store was not filled in on the Advice Notes by the senders. Non-weighment of scarp material on way to Store Dept thus increased the risk of pilferage/theft.
- Railway Board (January 2010 and November 2012) advised Zonal Railways/Production Units to use modern technological tools such as digital cameras/ CCTV to improve efficiency in scrap disposal system and to convey message of watchful eye as a deterrent to manipulations. Review of position of such security measures in nine Zones[241] and three PUs[242] revealed that digital cameras were provided only in four Zonal Railways (SCR, SR, ER and MR) and CCTVs were provided in only in one Zonal Railway (CR) and in one production unit (ICF/ Chennai) till the time of audit (August 2013).

It was also observed that no timelines were prescribed for various stages of management of scrap of rolling stock viz. condemnation, intimation, preparation of lots and disposal. The average time taken from condemnation by the user Departments[243] to intimation to Stores Department was 66 days and 96 days from the date of intimation to Stores Department to sale of lot. However, the maximum time taken was 1232 days in CR (in one case of wagons), 5891 days in SR (in one case of coaches) and 1447 days in WCR (in one case of locos).

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[238] In WR(DHD, SBI, MX,PRTN), in CR(HBHR, Manmad), in SCR(Lallaguda), in SECR(GSD/Raipur), in SR(GSD/PER), in NR(SSB,AMV), in ECR(SPJ), in ER (Belur, Jamalpur) in NER(GKP), In ECoR(MCS/BBS), in SER(Scrap Yard/KGP, R-Yard/KGP)

[239] SER, ER, SCR, SWR, and WR

[240] GSD/ PER

[241] NCR, SR, ER, SCR, CR, ECR, SWR, SECR and MR

[242] CLW, DLW and ICF

[243] Mechanical and Electrical departments

Absence of weighment facilities at senders' locations was a weak link, which enhanced risk of theft/pilferage of stores on the way to scrap depots. There were also delays in sending intimations of condemned rolling stock by the user departments to the Stores Department. Further, non disposal of unserviceable released items not only led to blockage of revenue, but also financial loss due to deterioration and reduction in value of scrap.

5.1.2.4 Disposal of Scrap

After identification and collection of scrap, lots for similar items are formed in the Scrap Yard and reserve price fixed by the COS for all items and auction for lots are arranged. Lots of Rails are arranged on 'as is where is' basis and fastenings of Permanent Way materials are kept in Section Engineer (Way) premises where lots are formed for auction. Rolling stock is also formed into lots in Scrap Yards. After auction the reclaimable fittings of rolling stock such as wheel sets, axle boxes, springs etc. are separated by cutting of the rolling stock.

5.1.2.4.1 Sale of Lots

As per provisions of IRSC the Railway Administration should ensure that there is no variation in the quantities of lots as indicated in the Register of lots and quantity mentioned in the Auction Catalogue before conducting auction and effecting deliveries.

Review in audit revealed that out of 87520 lots across 13 Zones[244] and five Production Units[245] sold during the 2010-13, in 303 lots, scrap weighing 2849.69 MT and 690 items valuing ₹6.75 crore was found short at the time of delivery.

The Railway Administration attributed the shortages to visual measurement of lots (SER), deliveries found short at Scrap Depot, measurement of weight on assumption or average basis (NER, WCR), theft (SECR), measurement of weight on approximate basis due to non-availability of weighing facilities with the stock holders (WR) and mixing of different materials and inadequate source segregation at the shop level (ICF). The above replies confirm failure of Railway Administration in ensuring a robust internal control system to prevent pilferage/theft and consequent loss to Indian Railways.

5.1.2.4.2 Lots sold below Reserve Price

Para 2411 (2) of IRSC provides that Reserved Prices should be fixed by the COS or Depot Officer on the basis of bids obtained at past auctions and any other information available. The basis for fixation of Reserve Price is the rate obtained for the particular item in previous auction, prevailing market rate, physical condition of the lot, location and transportability of lot. As per Railway Board's instructions the auctioning authority has the discretion to sell the item below the Reserve Price up to 10 *per cent*. Bids lower than the Reserve Price may, however, be accepted by the Depot Officer where found expedient provided the Depot Officer records his reasons in writing.

[244] SER, CR, NER, NWR, SECR, SWR, WCR, WR, SR, NCR, NR, ECR, Metro Rail
[245] ICF, RWF, CLW, DLW and DMW

An attempt was made to review the basis of fixation of Reserve Price by selection of 50 lots in a year randomly in Zones and Production units. However, the records of calculation of reserve price for various lots were not made available to audit. Hence, audit could not verify the basis adopted for fixation of the reserve price. The Railway Administration refused to furnish the reserve price for the sold lots quoting confidentiality of the same in 12 Zones[246] and three production units (DLW, ICF and RCF). In four Zones (CR, NFR, SER, SECR) and two Production Units (CLW and RWF), where information was furnished, it was observed that no lot was sold at more than 10 *per cent* below the reserve price. Of the lots checked, in 32 out of 150 (CR), 11 out of 150 (SECR),157 out of 157(SER), 11 out of 482(CLW) and 2 out of 50 (RWF) were sold below the reserve price.

5.1.2.4.3 Delay in disposal of Lots

Para 2410 of IRSC provides that all scrap materials accumulated for auction sale should be separated into convenient lot sizes that would suit the bidders at auctions. The position of lots remaining undisposed for more than six months as on 31 March of the last three years was as follows:

Table 5.1 - Lots remaining un-disposed for more than 6 months

As on	Scrap	Value of lots lying un-disposed (₹ in crore)
31 March2011	10542.331 MT scrap including 6 coaches, 9 wagons and other 2013 items	25.70
31 March 2012	8776.046 MT scrap including 4 coaches, 6 wagons, 9 vehicles and other 854 items	17.36
31 March 2013	17177.273 MT scrap including 31 wagons, 10 vehicles and other items	42.09

(Source: Lot Register of selected Scrap Yards of concerned Zonal Railway)

As can be seen there was a sharp increase in scrap pending disposal as on 31st March 2013 of about 64 *per cent* over that pending disposal in March 2011. Non receipt of bids/bids being less than the reserve price/non availability of approach roads were the main reasons for the lots remaining undisposed for over 6 months in seven Zones[247].

During test check it was further observed that:

- In SR, permanent way scrap weighing 1143.81 MT (₹ 3.24 crore) remained undisposed for more than six months. The main reasons attributed for non disposal of rails were that the rails were placed between tracks, water logging, lack of road approach, usability of crane and lead distance.

Fig. 5.1 - Scrap of rails lying in between tracks in Perambur

[246] ER, NWR, SCR, SWR, WCR, WR, SR, ECoR, NR, ECR, NCR, NER
[247] SER, CR, WCR, WR, ECoR, NR, and ECR

- In NR, various type of P-way ferrous materials (450.23MT rails etc & 1406 sleepers) valuing ₹1.16 crore generated from renewal works and declared unserviceable during June 2010 to December 2012 remained undisposed till July 2013 for periods ranging from 8 to 38 months. Also, engineering scrap of 175.176 MT of 52kg rails[248] and 30.090 MT of wrought iron valuing ₹60.62 lakh that was offered for disposal in December 2012 at Lucknow Division remained undisposed till July 2013.
- In ECR at Obra Thermal Power Station (OTPS) two rakes consisting of 143 tank wagons were brought to Obra B yard for loading of ash slurry in February 2009 and August 2009. These wagons were not suitable for loading Ash Slurry. All these 143 wagons except wheel and axle were condemned on 27th December 2010. These have still not been auctioned (March 2014). The reclaimable wheels and axles of these 143 wagons were kept at "'B'" Yard of Obra since December 2010. No decision had been taken to despatch these wheels and axles for recycling.

Audit examination of records of Mechanical and Store Departments revealed that there is no time line prescribed for disposal of condemned rolling stock. There was a wide variation over individual zones in the time taken to dispose off scrap rolling stock. The maximum time taken for sale of condemned rolling stock from the date of condemnation was 1247 days in CR (in one case of wagons), 6149 days in SR (in one case of coaches), 1572 days in WCR (in one case of locos).

Delay in disposal of lots resulted in accumulation of unsold lots in Zonal Railways. Audit examination of records relating to auctions held during the period of audit revealed that the percentage of unsold lots checked in all Zones varied from 3.5 *per cent* during 2010-11 in NFR to 100 *per cent* in NR during 2011-12 and in SECR and RWF, Bengaluru during 2012-13. The percentage of unsold lots in Zonal Railways varied from 3.50 *per cent* in NFR to 97.62 *per cent* in RWF, Bengaluru during 2010-11, from 0.40 *per cent* in ECoR to 100 *per cent* in NR during 2011-12 and from 4.99 *per cent* in ECoR to 100 *per cent* in SECR and RWF, Bengaluru during 2012-13. In thirteen[249] Zones and four[250] Production Units the percentage of unsold lots was more than 40 *per cent*. However, in Metro Railway, Kolkata the percentage of unsold lots was 21 *per cent* in 2012-13. The Railway Administration attributed unsold lots to non receipt of bids and/or receipt of bids at less than reserve price.

5.1.2.4.4 Utilization of scrap by Railways

Para 2404 of IRSC provides that scrap suitable for use as raw materials for foundries in railway workshops should invariably be reserved for such use, only the excess over such requirements should be sold. In house utilization of scrap was also emphasized by Minister of Railways in his Budget Speech for 2004-05.

The demand of scrap rails by Wheel Manufacturing Plant (WMP)/Chapra and Rail Wheel Factory (RWF)/ Bangalore and supply of rails against the same by respective Zones is given below:

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[248] 52 Kg Rails – type of rails, for which one metre weighs 52 Kg
[249] SCR, NWR, WR,WCR, SCER, SR, NR,SWR,NCR, ECR, SER, NER and Metro Rail
[250] CLW, DLW, RWF and DMW

Table 5.2 - Demand vis-à-vis supply of scrap rails

Year	Demand of scrap rails(MT)	Supply by respective Railways(MT)	Difference(+/-)
2010-11	65191	21874.695	(-)66 *per cent*
2011-12	33413	16911.747	(-)49 *per cent*
2012-13	52309.725	62163.969	(+)19 *per cent.*

(Source: Individual requisitions)

It was seen that though sufficient quantity of rail scrap was generated to fulfill the demand of WMP/Chapra and RWF/Bangalore seven Zones[251] sold the scrap locally at a rate which was 2 *per cent* (SWR) to 26 *per cent* (ER) lower than the rate offered by the above Railway Manufacturing Plants. Thus, sale to private parties and non-supply of demanded rails to WMP/Chapra and RWF/Bangalore resulted in loss of ₹21.11 crore.

5.1.2.4.5 Lifting of Scrap

Railway Board prescribes (May 2012) that free delivery time shall be a maximum of 50 days from the date of auction. The time limit can be extended up to 65 days by COS/CMM. However, beyond 65 days, delivery can be given only after payment of ground rent. Audit reviewed the time taken from the date of auction to the date of lifting of scrap and observed that the minimum and maximum time taken from date of auction to the date of lifting of scrap rails were 1 day in NWR and 369 days in SCR respectively. Out of 1370 lots auctioned, in 143 cases material was lifted beyond the permissible time of 65 days. However, in only 10 cases ground rent was recovered and in 133 cases ground rent was not recovered. The total unrecoverable amount was estimated as ₹3.52 crore.

5.1.2.5 Monitoring and Internal Control Mechanism

The existence of an effective Internal Control Mechanism system plays an important role in preventing and detecting irregularities/fraud in disposal of scrap.

5.1.2.5.1 Stock verification of scrap material at Scrap Depots

Para 3202 of IRSC Clause 4.4 provides for annual stock verification of all items that had no issue for 12 months and above, once in a year. The stores should be verified by Stock Verifiers of the Accounts Department as per scheduled programme. While reiterating these instructions (February 2010), Railway Board stated that the Central Vigilance Commission (CVC) has instructed that the Railways should ensure mandatory verification of stock held in stores annually. Review of records in 39 Store Depots ***(Annexure IV)***, where released materials/scrap are kept for auction revealed that:

- In 17 Stores Depots over ten[252] Zones and two[253] Production Units stock verification was conducted every year during the review period.

[251] SER, ECR, ER, SCR, SWR, SR and NR

[252] NWR (JU depot), WR (MX, DHD, SBI and PRTN depot), CR (Parel depot), SCR (Lallaguda depot), SR(GSD/PER and SSD/PTJ), NR (SSB, JUDW and AMV depot), SWR (Mysore depot), NER (Izatnagar depot), NFR (Sales depot Pandu, DBRT), SER (R-Yard and Scrap Yard)

[253] DLW (Scrap Ward), ICF (Shell depot)

- In 17 Store Depots over ten[254] Zones, no stock verification of scrap was carried out during the period of review.
- In NER (Gorakhpur Depot), CLW (CRJ) and RWF/YNK (GSD) stock verification was conducted in two of the three years under review. In NWR (BKN) and NFR (Sales Depot, NJP) stock verification was conducted only once during the review period.

The Railway Administration attributed the deficiencies in conducting stock-verification as per norms to unverifiable condition of material (mix material) (WCR), non-cooperation by the store unit (NWR, NFR, CLW) and improper information displayed in MMIS[255] (NWR,), absence of stock-verifier (SWR and CLW) and non-availability of weighing facilities (CLW).

Thus, despite CVC's recommendation for mandatory verification of stocks held in stores, the Railway Board failed to ensure that Zones were conducting stock verification of released/scrap materials as per laid down norms.

5.1.2.5.2 Non clearance of debit/ credit balances from Scrap Sales Suspense Account

Transactions which cannot be booked to final heads of account for any reason or due to non-availability of detailed particulars are booked under Suspense Head temporarily, till they can be adjusted to their final head of account when the detailed particulars are available. Huge outstanding in suspense head would indicate delays in settlement of transactions and inaccurate reflection of transactions in accounts. Till the time suspense balances are cleared, the debit would not be charged to the respective expenditure head and credit would not be charged to the final revenue head. Review of Scrap Sales Suspense Account as on 31st March 2013 revealed that:

- Debit balance of ₹688.71 crore were pending for over three years for want of relevant credit particulars in six Zones[256] and two Production Units[257]. Debit suspense of ₹685.67 crore in SWR was the highest.
- Credit balance of ₹712.04 crore were outstanding for over three years for want of relevant sales issue notes in eight Zones[258] and two Production Units[259] Credit suspense of ₹697 crore was the highest in SWR. In SR, a sum of ₹ 0.65 crore was outstanding for over three years (March 2013) due to pendency of court cases, one case was outstanding for more than 13 years.

Non-clearance of debit/credit balance under suspense head indicated inadequate follow-up by respective units and weak internal control mechanism.

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[254] Metro Rail(Noapara depot), WCR (WRS-Kota and CRWS-Bhopal depot), CR (Matunga, Manmad and Hajibunder),SECR (GSD/Raipur), SR (GSD and SSD/GOC), SWR (Hubli depot), NCR (JHS and CNB depot), ECR(SPJ stores depot), ER (Belur, Jamalpur and Halisahar depot) and NFR (Sales depot NBQ)

[255] Material Management Information System

[256] NWR, WR, NR,SWR, NER and SER

[257] RCF and DMW

[258] NWR, WR, SECR, SR, NR,SWR, NER and SER

[259] RCF and DMW

5.1.2.5.3 Avoidable payment of Dividend

An asset created from Capital i.e. support from the Central Government carries a dividend payable by the railways to Central Government. The rate of such a dividend was 6 *per cent*, 5 *per cent* and 4 *per cent* during the years 2010-11, 2011-12 and 2012-13 respectively. When such an asset is disposed off after being declared as scrap, the original cost of the same is required to be written back to Capital, so that the total Capital at charge is reduced, thereby reducing the amount payable by railways towards dividend to GOI. Therefore, increase in dividend payable by railways has an impact on its profitability. In the event of condemnation of rolling stock funded from Capital, an estimate should be prepared writing down the original cost of such stock from Capital.

Examination of write back adjustments by audit revealed that:

- Write-back adjustment of 1110 coaches, 13236 wagons and 144 locos of seven Zones[260] were made in the financial years subsequent to condemnation.
- In SCR, write-back adjustments were done on quarterly review basis. In SWR, write-back adjustments were made within one month to 12 months of condemnation of rolling stock.
- In eight Zones[261] no write-back adjustment of rolling stocks were made during 2010-13 in spite of condemnation of rolling stocks were made. In WR out of four Divisions, write-back adjustment of rolling stocks were made in only two.

Due to delay in write-back adjustment/non-adjustment of condemned rolling stock viz. 122 coaches, 650 wagons and 70 locos (574 coaches, 2973 wagons and 108 locos were condemned during 2012-13 for which write back adjustment was due in 2013-14 and the dividend has not been calculated) the Railway Administration had to pay avoidable dividend of ₹7.80 crore.

Thus, Internal control mechanism was deficient as all Zones were not complying with codal provisions regarding physical verification. Zones also failed to follow the norms regarding write back adjustment of rolling stock procured from capital and this led to payment of avoidable dividend of ₹ 7.80 core.

5.1.3 Conclusion

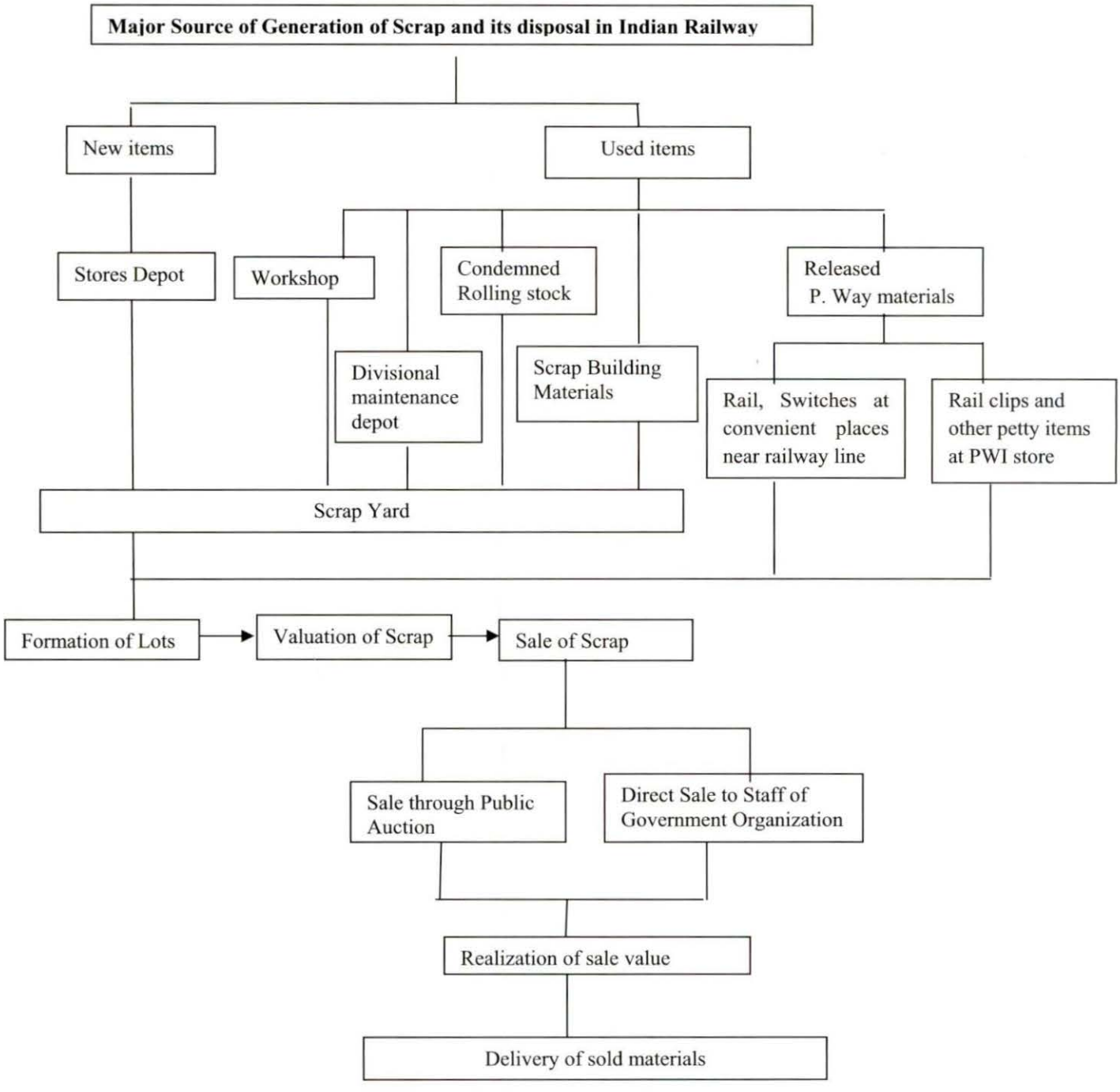
The planning and estimation of scrap generation was not realistic. Wide variations in release of rails as compared to estimated projections in selected works indicated that the estimates were not prepared as per the field/track conditions. There were delays in identification and collection of scrap over various Zones. Absence of weighment facilities at senders' locations was another weak link which enhanced risk of theft/pilferage of stores on the way to scrap depots. Lots formed for the purpose of disposal of scrap were found short at the time of delivery. There were delays in disposal of lots and thus accumulation of unsold lots in Zonal Railways. Most of the Zonal Railways and Production Units did not furnish the reserve price of sold lots to audit. As a result of non-sharing of the basis of fixation of reserve price audit could not compare the reserve prices fixed over various zones and

[260] NWR, CR, ER, NER, SCR, SWR and SER
[261] WR, WCR, SECR, SR, NR, NCR, ECoR and ECR

therefore could not assess the basis of fixation of reserve price. Stock verification was also not done as per norms in more than 50 *per cent* of the stores depots checked.

Thus, the system of assessment, retrieval and disposal of scrap and the monitoring mechanism in place was deficient and delays at various levels enhanced the risk of deterioration of scrap, decrease in value and theft and pilferages.

Appendix I
Flow Chart of Scrap



Appendix II

No. of Completed CTR/TRR/GC works in Zones selected for audit

Zone	No. of CTR	No. of TRR	No. of GC
NWR	2	2	1
WR	2	2	1
WCR	2	2	-
CR	2	2	1
SCR	2	2	1
SECR	3	1	1
SR	1	3	1
NR	2	2	-
SWR	1	3	1
NCR	2	-	1
ECR	4	-	1
ER	2	2	1
NER	1	3	1
ECOR	2	2	1
NFR	-	4	1
SER	3	1	-
CLW	1	-	-
Metro	-	2	-
Total	**32**	**33**	**13**

Appendix III

Store Depots selected in Zones for Audit

Zone	No. of Scrap Yard	Scrap Yard/Depot
CR	4	(1)Parel,(2) Matunga, (3) Manmad, (4) Hajibunder
ER	3	(1)Belur, (2) Halisahar, (3) Jamalpur
NCR	2	(1) Jhansi, (2) Kanpur
NER	2	(1)Gorakhpur, (2) Izatnagar
NFR	4	(1)New Bongaigoan, (2) Pandu, (3) Dibrugarh, (4) New-Jalpaiguri
NR	3	(1) Shakurbasti, (2) JUDW, (3) AMV
NWR	3	(1)Bikaner, (2) Jodhpur,(3) Ajmer
SCR	1	(1)Lallaguda,
SECR	1	(1)Raipur
SER	1	(1)Kharagpur
ECoR	1	(1)Mancheswar
SWR	2	(1)Hubli, (2) Mysour
WCR	2	(1)Bhupal, (2) Kota
WR	4	(1)Dahod, (2) Mahalaxmi, (3) Pratapnagar, (4) Sabarmati
ECR	1	(1)Samastipur
SR	1	(1)Perambur
Metro	1	(1)Noapara
ICF	1	(1)ICF Shell
DLW	1	(1)Scrap Ward
RWF/ Yalahanka	1	(1)Scrap Yard
CLW	1	(1)Scrap Yard
DMW/ Patiala	-	
ICF/Kapurthala	-	
Total	**40**	

5.2 Working of Integral Coach Factory, Chennai

5.2.1 Introduction

Integral Coach Factory (ICF) at Perambur, Chennai in Tamilnadu, established in 1955 is a premier coach production unit of Indian Railways. ICF's business span covers design, development and manufacture of coaches. Its annual production capacity was fixed at 1000 coaches (1990-91) that was enhanced to 1250 coaches (2010-11) and to 1500 coaches (2011-12). Around 1500 to 1600 coaches of various types consisting of conventional coaches[262], Heavy build coaches[263] and LHB[264] design light weight stainless steel coaches having ICF bogies[265] are manufactured every year in ICF. It has two separate units-viz. Shell division and Furnishing division. The Shell division manufactures bare shells and Furnishing division turns the bare shells into full-fledged coaches by providing flooring, panelling, wiring, seats, windows, fans and lights.

There are two more coach production units in India viz. Rail Coach Factory (RCF) at Kapurthala in Punjab (Established in 1986) and Rail Coach Factory (RCF) at Lalganj, Raebareli in Uttar Pradesh (Established in 2012). RCF, Kapurthala is the largest coach Production unit with coach manufacturing capacity of 1600 coaches every year. The RCF, Raebareli will manufacture modernised light weight stainless steel LHB design coaches, specifically Anubhuti coaches for Rajdhani and Shatabdi trains and its expected manufacturing capacity is 1000 coaches every year.

ICF is headed by a General Manager (GM). He reports to Member Mechanical at Railway Board who is assisted by Additional Member (Production Units), Executive Director (Production Units) and Director (Production Units) posted in Production Unit & Workshop Directorate. GM (ICF) functions with the assistance of Chief Mechanical Engineer CME), Chief Electrical Engineer (CEE), Chief Engineer -Civil Works (CE), Controller of Stores (COS), Chief Personnel Officer (CPO) and Financial Adviser & Chief Accounts Officer (FA&CAO) and their subordinate officers.

In this paragraph, Audit reviewed the records of the ICF with the objectives to assess whether

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[262] Conventional coaches are normal and routine types of non-air-conditioned and air conditioned coaches. Non-air conditioned conventional coaches include second class General sitting coaches (SG GS & SG GSCZ,), second class Sleeper coaches (SG GSCN), second class with Brake van and Luggage rock (SG SLR) and second class cum Brake van (SG SR) etc. Air conditioned coaches include AC chair car ((GS SCZ AC), AC chair car for Jan Shatabdi ((SG ACZ JS), AC first class Sleeper coach (SG FAC), AC second class two tier coaches (SG ACCW), AC first class cum second class two tier coaches (SG FACCW), Air conditioned chair car first class and second class, Double deckers etc.

[263] Heavy build coaches are either special types of coaches or coaches that are meant for specific purposes. These are Alternating Current Electric Multiple Unit coaches (AC EMU), mainline EMU coach (AC MEMU), Diesel Electric Multiple Unit coaches (DEMU), ACEMU coaches for Rail projects like Multi Modal Transport System (MMTS) and Mumbai Rail Vikas Corporation (MRVC), Special coaches for Palace on Wheels, Deccan Odessy, Self propelled Ultrasonic Rail Test (SPURT) car, Self propelled Accident Relief Tool Van Trailer (SPART) car etc.

[264] Linke Holfmann Busch Company

[265] AC second class two tier (SG ACCW LHB) coaches

- Production activities were planned and carried out economically and efficiently,
- Vendor development was effective and Inventory management was economical and efficient; and
- Human resource management was efficient and effective.

While reviewing the performance of ICF, norms and guidelines issued by the Railway Board from time to time in connection with finalization of Production programme, allowed times[266], provision of man power etc, directions/instructions in respect of designs and vendor development issued by RDSO[267] and RITES[268] etc., codal provisions[269] and content of various reports[270] were kept in consideration. The period covered in Audit was four years i.e. 2009-13. Records maintained in various units of ICF, Perambur were scrutinized.

5.2.2 Audit Findings

5.2.2.1 Production Management

5.2.2.1.1 Production planning and frequent changes in production programmes

Railway stock utilised on Railway tracks to run Passenger/ Goods services is termed as Rolling stock. It mainly includes various types of locomotives, coaches and wagons.

Audit reviewed the finalization of production programmes of ICF and observed the following:-

- In order to meet the requirement, Railway Board prepares and finalises every year the Rolling Stock Programme (RSP) of Production Units of Indian Railways which includes the quantum of Rolling stock to be procured /produced. Initially a Production Plan for five years is drawn at Railway Board which is followed by an annual RSP for every year. As per codal instructions[271], provisions for new rolling stock in the annual RSP is to be made at least two years in advance. It is necessary to match the requirement in each year of the plan period and also to provide lead time for the procurement of raw material by the Production Units.

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[266] 'Allowed time' for a work is the time within which a worker shall complete an operation and earn bonus. This time would be normal time assessed plus other allowances like fatigue (25%), Contingency (12%), Bonus (33.33%) and Gauging (not on job)-5%.. It is expected that an average worker will complete an operation in 75% of the' allowed time' and earn 33.33% bonus.
[267] Research Design and Standard Organisation
[268] Rail India Technical and Economic Services
[269] Indian Railway Code for Mechanical Department (Workshops)
[270] High level safety review committee report/Study report of RITES
[271] Paragraph No.1503 of Indian Railway code for Mechanical department (Workshops)

The Annual Production Programmes of ICF were finalized belatedly by the Railway Board, the delay being one year for 2010-11 and around two years each for 2009-10, 2011-12 and 2012-13. The Railway Board frequently revised the production plans. In 2011-12 and 2012-13, the Railway Board revised the production plans twice and thrice respectively.

- Based on the above RSP approved by the Railway Board, the ICF Administration is required to prepare by the end of March every year their tentative internal production programme to facilitate material procurement.

  However, there was also a uniform delay of around one year in finalization of tentative internal production programmes by the ICF. Further, ICF revised the production programme on 27 occasions[272] during four years of review The main reasons stated by the ICF for frequent changes in finalized production programmes were-

  (i) Frequent changes in production programmes by the Railway Board;

  (ii) Delay in finalisation of design by the ICF in respect of new types of coaches planned for production by the Railway Board;

  (iii) Constraints in vendor development for coaches' components of latest technology;

  (iv) Requirement of more conventional GSCN[273] coaches in view of announcement of new trains in the budget.

Such delays in finalization of production plans and frequent revisions thereof at Railway Board and ICF were in contravention of codal provisions affecting adversely the production time line as commented in sub-paragraph 2.2 below.

5.2.2.1.2 Impact of frequent changes in production programmes

Audit noticed that frequent changes both by the Railway Board and ICF adversely affected the ICF functioning and production. It was observed that:

- Certain long lead items such as electric traction motors, electric equipments, wheel items, steel sheets and plates are utilised in the production of coaches. Procurement of these items require 12 to 18 months delivery period. Due to delay in finalisation of production programmes, the timely availability of such long lead items (wheel sets, electrics and traction motors) could not be ensured by ICF. Member (Electrical) observed (February 2011) that the procurement of electrics for 2010-11 and 2011-12 were placed by the ICF on M/ BHEL in May 2010 and December 2010 respectively involving delays of eight and three months. This was stated to be the main reason for shortfall in production (2010-11) of BG AC EMU rakes[274]. Moreover, the order placed for 2011-12 was also not for total requirement[275]. Audit observed that in respect of electrics for BG AC EMU rakes and in respect of traction motors for DEMU rakes the time taken in placement of purchase orders after receipt of indents was

[272] 5 times in 2009-10, 9 times in 2010-11, 4 times in 2011-12 and 9 times in 2012-13
[273] Second class sleeper coach.
[274] Eight rakes against the target of 16 rakes
[275] For 22 rakes against 40 rakes as per production programme

substantial[276]. This adversely impacted the production of heavy build coaches[277] during 2009-12; the shortage in production being 19, 09 and 15 *per cent* respectively.

- ICF was forced to resort to procurement action on more than one occasion for the same item of stores due to upward revision of requirement of stores. Audit test-checked randomly the records connected with the procurement of 80 items of stores during the period of review and noticed that in respect of 30 items of stores, procurement at higher rates on more than one occasion within a short interval had been made by the ICF involving extra expenditure of ₹4.64crore. (**Appendix-I**).
- The frequent changes in production programmes together with design changes resulted in heavy accumulation of inventory. At the end of March 2013, there was a movable surplus of ₹33.41 crore with the ICF. As many as 386 items of stores valuing ₹25.10 crore (119 Shell items – ₹8.79 crore and 267 Furnishing items – ₹16.31 crore) were lying for 12 to 24 months and 443 items valuing ₹8.31 crore (48 Shell items- value ₹1.51 crore and 395 Furnishing items value ₹6.80 crore) were lying for more than two years; thereby adding to the inventory cost. A test- check of eight non moving items out of these revealed that the inventory accumulation was due to change in production programme/ changes in designs **(Appendix II)**.

ICF stated (September 2013) that Rolling stock programme is centralized at Railway Board and only internal production programme is prepared by ICF. During discussion (February 2014) at Railway Board it was informed that revisions in RSPs were on account of variation in the actual requirement of coaches based on trains announced/ priorities to trains announced in the annual Railway Budget speech and to utilize production capacity available in ICF due to delay in production of coaches planned earlier.

It is felt in Audit that there is need for an informed synergy mechanism between Railway Board and ICF so that there is a definite plan for design, development and production for various types of coaches and the RSP is finalized timely leaving no space for any revision in proposed coaches/ change in designs. This would facilitate the initiation of activities in time for the procurement of important long lead items; thereby not hampering the production midway and accumulation of surplus inventory due to change in design etc.

5.2.2.1.3 Achievement of targets of production

It is important for a Production Unit that production targets fixed every year are achieved consistently.

As already stated, ICF manufactures different types of coaches viz conventional coaches, Heavy build coaches and specific LHB hybrid coaches[278]. Due to

[276] ranged between 47 to 262 days for electrics and from 162 to 225 days for traction motors,

[277] Alternating Current Electric Multiple Unit coach and Diesel Electric Multiple unit coach for Mumbai Rail Vikas Corporation.

[278] Linke Holfmann Busch (LHB) designed light weight stainless steel AC second class two tier coaches. These are called hybrid coaches as the bogie utilised was conventional ICF bogie instead of FIAT bogie.

difference in designs, material/ equipments utilized and requirements to facilitate the passengers, the magnitude of work involved in the manufacture of different types of coaches varies. In order to bring the work contents for various coaches on a comparable platform, the work content of General Sitting (GS) Coach has been adopted as one unit i.e. basic unit or equated coach unit (ECU). The work contents for other types of coaches are measured in terms of this basic unit i.e. ECU.

Analysis by Audit of the fixation and achievement of targets revealed the following:-

Table 5.3

Year	Proposed by ICF		Accepted by Railway Board		Achievement	
	Number of Coaches	ECU	Number of Coaches	ECU	Number of Coaches	ECU
2009-10	1511	2265.25	1433	2171.37	1433	1968.00
2010-11	1600	2316.25	1500	2203.58	1503	2088.08
2011-12	1500	2029.25	1510	2098.60	1511	2014.60
2012-13	1564	2102.42	1585	2177.65	1620	2208.95

(Source- Tentative Annual Production Programme prepared by ICF, Annual Production Programme approved by Railway Board and Coach outturn sent by ICF to Railway Board)

The targets in terms of number of coaches approved by the Railway Board vis a vis actual outturn in respect of conventional coaches, heavy build coaches and specific LHB design hybrid coaches during 2009-13 were as under:-

Table 5.4

Type of coaches	2009-10		2010-11		2011-12		2012-13	
	Approved Target	Actual out turn	Approved target	Actual out turn	Approved target	Actual out turn	Approved target	Actual out turn
Conventional coaches	392	819	553	771	743	852	1051	1079
Heavy build coaches	756	608	807	732	747	633	489	521
Specific LHB Hybrid coaches	285	6	140	0	20	26	45	20
Total	1433	1433	1500	1503	1510	1511	1585	1620

(Source-Annual Production Programme approved by Railway Board and ICF's Outturn Statement)

From the above tables it may be seen that:

(I). Although the production targets in terms of number of coaches produced was achieved by the ICF, there was shortfall in achieving the approved annual production targets in terms of ECU, except for 2012-13.

Since the ECU is higher for heavy build coaches, the achievement of targets only in terms of number of coaches indicates that heavy build coaches were manufactured less than the target fixed and production of conventional coaches was more than the target fixed. Against the total target of 3289 Nos. heavy build coaches fixed by the Railway Board the actual total outturn by the ICF was 2546

coaches (77 *per cent*). On the other hand, conventional coaches were manufactured more than the target i.e. 3521 conventional coaches (129 *per cent*) against target of 2739 coaches.

The main constraints identified by the ICF for lower achievement of targeted production in terms of ECU were:

- Shortage of Wheel sets for heavy build coaches; and
- Delay in receipt of electric equipments and traction motors from BHEL and Crompton Greaves for heavy build coaches, the only two suppliers of these items.

Audit observed that the Working Group on Railway Programme for the Eleventh Five Year Plan (2007-12) emphasized the need for complete switch over from Schelierien Bogies used in conventional coaches to LHB design bogies as these were maintenance friendly and required lesser pit attention. High Level Safety Review Committee also recommended for complete switch over to LHB type coaches and stopping the production of conventional type coaches. However, due to shortage of Wheel sets and delay in receipt of electric equipments and traction motors during 2009-12 for heavy build coaches[279], ICF had to focus on the production of the conventional coaches. The relatively higher production of conventional coaches was, thus, against the objective of phasing out the conventional coaches. These constraints could have been addressed effectively, if the timely supply of long lead items of stores had been ensured through finalization of annual production programmes two years in advance as envisaged in the code[280].

(II). With an idea to overcome the problem of corrosion in conventional coaches made up of corten steel fixed on ICF bogie and to derive associate life cycle cost advantage of LHB design, Railway Board decided (November 2007) to switch over to the manufacture of Self Generating Stainless Steel shells of LHB design fitted on ICF bogie (instead of FIAT[281] bogie) i.e. Hybrid coaches. However, Railway Board decided to stop the production (August 2011) in view of their speed limitations and maintenance problems besides superiority of LHB coaches on FIAT bogie. In view of their speed limitations and safety aspects, their production has continued against the targets fixed so as to utilise the coach shells manufactured and material/ assemblies procured.

Audit observed that during 2009-12, the shortfall in production in ECU terms was 402.87 ECU. However, there was excess production to the extent of 31.30 ECU in 2012-13. The value of lesser outturn of coaches due to this net deficit in production (371.57 ECU) during 2009-13 on account of non-achievement of approved production plan in terms of ECU has been estimated at ₹760.71 crore. The minimum value of lesser outturn for General Sitting coach (SG GS), the cheapest coach with ECU as one, comes to ₹282.31 crore. The lesser outturn in ECU terms also resulted in lesser production of more demanded coaches, blocking up of investment on procured inventory, lesser utilisation of labour, increase in turnover ratio, besides distorting the budgetary process.

[279] from M/s BHEL and M/s Crompton Greaves
[280] Indian Railway Code for Mechanical department (Workshops)
[281] FIAT- Fabbrica Italiana Automobili Torino

ICF stated (September 2013) that the changes in the approved production programmes were made with the approval of Railway Board. The fact remains that ICF was unable to meet the revised production targets fixed by Railway Board. Further, the delays in placement of orders were mainly on account of delayed finalization of production programmes. Consequently, in view of delay in completion of purchase process, ICF increased the production of conventional coaches even though such coaches are required to be phased out.

5.2.2.1.4. Comparison of cost of manufacture in ICF and RCF

Any production unit should aim at keeping manufacturing cost at the minimum. A comparison of cost of various inputs in two Organisations, like RCF/Kapurthala and ICF/ Chennai would be a useful guide to assess weaknesses in efficient production.

(i) A comparison of the unit cost of common types of Coaches manufactured by ICF and RCF during the period from 2009-13 revealed that ICF was incurring higher costs ranging from 12 to 30 *per cent* as detailed below:

Table 5.5 (₹In lakh)

Year	Type of Coach	Out turn	Unit cost in ICF	Unit cost in RCF	Difference	Extra cost	Percentage of variation
2009-10	GS[282]	292	75.69	59.61	16.08	4695.36	26.98
	SCN[283]	180	80.12	66.14	13.98	2516.40	21.14
	SLR[284]	33	72.89	58.37	14.52	479.36	24.88
2010-11	GS	265	75.25	64.47	10.78	2856.70	16.72
	SCN	128	76.28	66.40	9.88	1264.64	14.88
	SLR	97	80.14	61.58	18.56	1800.32	30.14
2011-12	GS	375	78.68	69.00	9.68	3630.00	12.30
	SCN	183	84.84	71.95	12.89	2358.87	17.92
	SLR	85	83.21	67.37	15.84	1346.40	23.51
Total						**20948.05**	

(Source- ICF's Outturn Statement and Compendium of cost of coaches)

As can be seen from the above table, this resulted in extra expenditure of ₹ 209.48 crore over the period 2009-12.

(ii) The cost of production of a coach includes cost of labour, material, overheads and oncosts[285]. Audit analysed the extra cost of ₹ 209.48 crore cost element-wise and observed that labour and overhead costs in ICF were much higher than in RCF as detailed below:

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[282] General Sitting
[283] Sleeper Class
[284] Sleeper cum Luggage coach
[285] Oncosts include certain expenditure which cannot be charged direct to the cost of article manufactured or work done. Oncosts are categorised as (i) Proforma oncost i.e. all oncosts not included in cost of work done in Railway Workshops but which would be so included in commercial costing, (ii). General oncosts- all oncosts other than Proforma oncosts which is incurred in common with more than one shop or department within a Workshop and (iii) Shop oncost-all oncosts incurred within an accounting unit (shop, department or section).

Table 5.6

(₹In lakh)

Year	Type of coach	Labour		% higher	Material		Overheads		% higher	On costs	
		ICF	RCF		ICF	RCF	ICF	RCF		ICF	RCF
2009-10	GS	**9.86**	**3.78**	***161***	37.48	41.28	**25.49**	**11.92**	***114***	2.86	2.63
	SCN	**10.28**	**4.11**	***150***	39.22	46.15	**27.74**	**12.97**	***114***	2.88	2.91
	SLR	**10.75**	**3.82**	***181***	33.69	39.95	**25.61**	**12.03**	***113***	2.84	2.57
2010-11	GS	**10.67**	**4.05**	***163***	37.38	44.49	**24.33**	**13.56**	***79***	2.87	2.37
	SCN	**10.75**	**4.38**	***145***	39.08	45.71	**23.57**	**14.68**	***61***	2.88	1.63
	SLR	**11.26**	**4.07**	***177***	39.69	41.99	**26.29**	**13.63**	***93***	2.90	1.89
2011-12	GS	**10.19**	**5.81**	***75***	41.45	43.95	**24.90**	**17.14**	***45***	2.14	2.10
	SCN	**11.59**	**6.33**	***83***	42.60	44.76	**28.48**	**18.67**	***53***	2.17	2.19
	SLR	**11.93**	**5.84**	***104***	39.75	42.24	**29.37**	**17.24**	***70***	2.16	2.05

(Source- FA&CAO/ ICF Letter No.ACA/CR/Cost-Infn/649/616 dated 05 June 2012 to Director Finance (Railway Board) and Compendium of cost of coaches)

- The above table reveals that both labour and production overhead costs were higher for all coach types at ICF. Here, it would be important to mention that during 2011-12 both production units manufactured coaches of the same magnitude[286]. However, the total labour posted in ICF was 60 *per cent* more than that of RCF[287]. Thus, the RCF achieved the same level of coach production with about 37 *per cent* lesser staff.
- Audit noticed that the increased overheads were on account of cost of deployment of more number of EIWs[288] and maintenance of over aged assets. Out of total number of 1016 machines, 684 machines (67 *per cent*) were over-aged as they had outlived their normal codal life (15 years) as shown in the table below-

Table 5.7

Age of machine	Number of machines	Percentage (with respect to total machines)
Over 50 years	186	18.31
Between 26 and 50 years	237	23.32
Between 16 and 25 years	261	25.69
Total	684	

(Source- Data of Plant & Machinery in ICF)

- RITES in their Study Report (May 2006) had observed that when too many types of coaches are taken up simultaneously for manufacture, advantage of mass production are lost. For optimum efficiency and ease of working, RITES recommended that at any time not more than five types of coaches should be under manufacture. However, ICF did not implement this recommendation and manufactured 6.8 to 9.6 times[289] of suggested limit of five types of coaches. As a result, there were many batch orders for small quantities requiring more set up time and consequent enhanced allowed

[286] ICF manufactured 1511 coaches and RCF manufactured 1501 coaches
[287] Total labour in ICF-12226 and RCF-7645
[288] Essential Indirect Workers posted for doing subsidiary works
[289] 45, 34, 36 and 48 types of coaches during 2009-10, 2010-11, 2011-12 and 2012-13 respectively.

time[290]. The productivity was adversely affected due to loss of time in changing tools, jigs, fixtures and raw materials thereby impacting the cost of manufacture.

(iii). The cost of material utilized on the production of coaches in ICF was, however, less than that of RCF. The components required for manufacture of conventional coaches were fabricated in-house by ICF after procuring raw material from the trade and cost of raw material alone was taken as cost of material. However, in RCF, coach components[291] were procured from trade as finished product that increased the cost of material.

ICF communicated (June 2012) to the Railway Board that production cost is more at ICF in comparison to RCF as the manufacturing process at ICF was different. At ICF, in-house production of components was more and handling of Machines & Plants/ Equipment was sophisticated. Further, labour cost at ICF was higher in comparison to RCF due to posting of ICF staff in Chennai where rates of payment for House Rent Allowance and Transport Allowance were higher. FA & CAO/ ICF viewed (June 2012) that detailed analysis of various inputs was required to exercise cost control.

However, Audit observed (2013) that no detailed analysis of various inputs had been done by ICF to contain the manufacturing cost. ICF agreed (September 2013) to examine the reasons for higher labour and overhead costs. There was no communication from ICF in regard to action taken by them in this regard.

5.2.2.1.5 System of Costing

ICF adopts a system of batch order costing where all cost incurred towards labour, stores and overhead in the manufacture of coaches are captured batch wise. On completion of a coach, the entire cost of manufacture is transferred to Railway Board for distribution among Zonal Railways. As per provisions[292], cost reports are to be finalised within 10 weeks after the issue of completion certificate for a Batch Order. Railway Board compiles a cost compendium each year for the purpose of comparison of cost of coaches manufactured by various production units of Indian Railway.

Examination of records by Audit revealed that Railway Board had expressed dissatisfaction on the status of cost records of ICF and pointed out cases of understatement of cost under many batch orders in the compendium of cost for 2010-11. A test check in Audit of 45 cost reports (21 reports of Shell division and 24 reports of Furnishing division) out of 373 cost reports relating to the period 2009-12 revealed that:

- None of the cost reports were finalized within the stipulated period of 10 weeks. The average delay in preparation of cost reports was 60 weeks.

[290] Time allowed to complete a work/ manufacture an article
[291] Bogie frame, Bogie bloster, End wall, Under frame, Body bolster, LS beam etc.
[292] Paragraph Nos. 1337 to 1343 of Indian Railway Code for Mechanical department (Workshops) read with ICF's Joint Procedure Order (May 2010)

- Though cost of a batch order was compared with the cost of previous batch order for manufacturing the same type of coaches, no meaningful analysis of cost variations was carried out.

Although cost reports are very important documents that help the management in controlling costs, their preparation was delayed due to delay in adjustments of materials etc by the ICF. Consequently, an important managerial tool could not be utilized for cost control besides delayed transfer of the debits to Railway Board for further distribution of cost among concerned Zonal Railways.

5.2.2.1.6 Augmentation of infrastructure facility

With the introduction of long formation of rakes of passenger trains on Indian Railways running with moderately high speed of 110 to 120 kilometer per hour, conventional coaches of ICF designs were not desirable from safety point of view. Indian Railways decided (1993-94) to design a light weight coach capable to run on present infrastructure at operating speed of 160 kilometer per hour. The coach design was to be tried first at RCF/Kapurthala and after successful trial, at ICF/Chennai. Railway Board engaged LHB, a German Company (1995) for supplying 24 coaches[293] and for 'Transfer of Technology (ToT)' to RCF. RCF acquired technology and started production (2001) and rolled out (December 2002) first rake of Stainless Steel LHB design coaches fitted on FIAT[294] bogies.

Further, as narrated in sub-paragraph 5.2.5.1.3 (II) production of LHB design Hybrid coaches at ICF as per Railway Board's decision (November 2007) had to be stopped (August 2011) due to their speed limitations and problems faced in their maintenance. The High level Safety Review Committee recommended (February 2012) for stopping the production of ICF designed conventional coaches and for immediate complete switch over to manufacture of LHB design coaches. In view of this, Railway Board directed (March 2012)[295] ICF to undertake necessary planning in this regard.

Audit observed that although technology for manufacturing LHB design coaches had been transferred to RCF/Kapurthala and they had rolled out first rake of such coaches in December 2002, there was no momentum at ICF in regard to trial of design for production of such coaches. However, a project had been sanctioned (2010-11) at a cost of ₹252.04 crore (2010-11) to enhance ICF's capacity to produce 1700 coaches per annum including 300 LHB coaches. The project scheduled to be completed by 2014-15 was progressing slowly; only 53 *per cent* of sanctioned cost (₹133.65 crore) had been spent (June 2014). It was seen that with a view to switching over to 100 *per cent* LHB design coaches without affecting the current production of conventional coaches, ICF had requested (September 2012) M/s RITES to identify the various factors for which technical expertise might not be available with ICF. M/s RITES had submitted (June 2013) their final report on road map for a complete switchover. The report was being scrutinized for planning the work (July 2014).

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[293] LHB design, Stainless steel shell fitted on FIAT bogie
[294] Fabbrica Italiana Automobili Torino, an Italian Company.
[295] Railway Board letter No. 2008/M(PU)/1/27 dated 12.03.2012

ICF stated (September 2013) that the complete switch over would take four years. The fact remains that although the technology had already been transferred by the German firm to RCF, Kapurthala in 2000 and RCF had rolled out their first rake in 2002, ICF has not been able to get the technical expertise for a complete switch over to manufacture the LHB coaches even after a long period of twelve years.

5.2.2.1.7 Vendor development

5.2.2.1.7.1 Inadequate vendor development for safety/vital items

The Production Units develop vendors for the manufacture and supply of items or components for utilization on manufacturing Railway asset. There are many items which are either vital for production or are of importance for safety. The purchase of such items is to be made from RDSO approved sources only. If vendor for an item is developed, it should conform to the drawings and specifications approved by RDSO[296]. It is obligatory for Production Unit Administration to follow all the guidelines /directions of the RDSO in regards to drawings, specifications and standards.

Axle box housing and buffer casings are safety items used in manufacture of coaches. These two items are procured from RDSO approved suppliers. In order to improve the quality of cast steel axle box housing and buffer casings, RDSO insisted (July and October 2009) that these items should be cast in class 'A' foundries. Based on this instruction, ICF reviewed their approved vendors list and delisted unqualified firms (March 2010). Consequently, only three approved firms were available for the supply. However, due to inability of approved vendors to meet the requirement as per production plan of ICF, they placed five purchase orders[297]on de-listed firms[298] for the supply of safety/ vital items[299] valuing ₹ 7.58 crore. The fact that firms were delisted was not brought to the notice of the Tender Committee.

The procurement of safety/vital items from the delisted firms indicated that the vendor development was not adequate and system to prevent placement of orders on delisted firms was not in place compromising safety of coaches and lives of travelling passengers.

5.2.2.1.7.2 Performance of approved vendors

As per the terms and conditions of purchase orders placed on approved vendors for the supply of items, the firm should complete the supplies within the due date of delivery mentioned in the Purchase order (PO). The performance of the vendors can be judged from their efficiency in this regard.

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[296] Research Design and Standard Organisation

[297] Two orders for supply of Axle box housing and one order for Side buffer arrangement (valuing ₹ 6.59 crore on M/s.Jagdamba Liquified Steels, Hathras, one order for supply of Axle box housing and another order for Side buffer arrangement (valuing ₹ 0.99 crore) were placed on M/s. Affine Steels Pvt. Ltd.Haridwar

[298] M/s Jagdamba Liquified Steels, Hathras and M/s Affine Steels Private Ltd.

[299] Axle Box housing and side buffer arrangement

Audit assessed the performance of approved vendors through a test-check of 544 POs selected in respect of 180 items of stores and observed that:

- In 62 POs, the firms failed to supply the contracted quantity and orders were cancelled. The failures indicated that while placing orders, the firms' capacity was not assessed correctly leading to cancellation of orders and consequent procurement at higher rates from suppliers involving avoidable extra expenditure of ₹ 4.65 crore.
- Of the remaining 482 purchase orders, while the firms adhered to the original delivery period in 258 orders (53.53 *per cent*), there was delay of up to 50 days in 119 cases (24.69 *per cent*) and beyond 50 days in 105 cases (21.78 *per cent*).

As the failure of the firms to supply the ordered quantity within the prescribed delivery periods upsets the production schedule, appropriate action needs to be taken in this regard.

5.2.2.1.7.3 Rejection of Material

In order to ensure quality of materials, stores are pre-inspected by RITES/RDSO and after ensuring the quality, the store material is supplied. As such, their quality certification have great importance and are also the base for advance payments. There should, therefore, be no rejection of material supplied by the firms after the issue of inspection certificates by these agencies.

Audit scrutiny revealed that stores pre-inspected by RITES/RDSO were rejected by ICF on 338 occasions during 2009-13. Out of these, in 270 cases the rejected materials were accepted by ICF after rectification of defects by the suppliers. As on 31 March 2013, the remaining 68 rejection cases had not been settled, the oldest rejection pertaining to year 2009.

It was noticed that Inspecting agencies were not performing very well as there were rejections even after certification by inspecting agencies. This is not a good practice as most of the materials procured by ICF are categorized as safety or vital equipment.

5.2.2.1.7.4 Inventory Management

Turnover ratio[300] (TOR) measures the efficiency of inventory management. Excessive percentage of turnover ratio denotes lesser issues and/or more receipts (in comparison to anticipated figures) during the year thereby increasing the value of closing balance of inventory at the end of year. Since the closing balance of inventory is linked with blocking up of capital, the level of TOR should be kept to the minimum possible. ICF had fixed a desired level of target of turnover ratio as 12 *per cent*.

It may be seen from the table below that every year the TOR was higher than the targeted/ desired level of 12 *per cent (11.68 per cent for 2012-13).*

[300] ratio of year end balance of stores held in stock to total issues made during the year.

Table 5.8

Year	Turn Over Ratio (*Percentage*)
2009-10	17.50
2010-11	17.48
2011-12	16.52
2012-13	19.38

(Source-Derivation from Store Transaction Statements of ICF)

Audit further noticed that value of stock held at the end of March 2010, 2011, 2012 and 2013 was substantial being ₹222.41 crore, ₹227.70 crore, ₹247.72 crore and ₹282.01 crore respectively. This is indicative of the fact that no efforts had been made by the ICF Administration to reduce TOR to the targeted level of 12 *per cent*.

For the manufacture of coaches many mechanical items are required to be stocked in Stores depot for issues to Shops for consumption on works. Generally the stock items are procured from trade/ vendors. The receipt of stock items has been more than their issues every year resulting in accumulation of inventory. This indicates that ICF was not able to assess accurately the material required for implementing its annual production plan leading to excess inventory.

Two cases exhibiting deficiencies in inventory management are discussed below:

- Air springs provided in coaches are a safety item. Railway Board decided (November 2007) to provide Air springs in secondary suspension of ICF coaches (conventional and LHB hybrid coaches) subject to clearance through oscillation trials. They directed RDSO to work out a scheme for arranging these trials and to ICF, to procure the minimum number of Air springs required for these trials (August 2009).

- ICF floated an open tender (February 2009) for procurement of Air springs sets for 612 coaches. Instead of procuring the minimum sets required for conducting oscillation trials, ICF ordered (September/ October 2009) Air spring sets for 326 coaches at a cost of ₹12.99 crore. ICF manufactured one AC coach and one non AC coach for conducting oscillation trials and despatched them to RDSO during September 2009 and March 2010 respectively. However, Railway Board directed (February 2011 and January 2012) ICF that Air spring on ICF design bogie should be stabilized and till then the use of conventional coil springs should be continued on LHB Hybrid coaches. The trials have still not been completed (December 2013).

  Examination of records by Audit revealed that ICF had utilized Air spring sets for 139 coaches (three sets for conducting oscillation trials and 136 sets for fitment in IRCTC coaches and LHB Hybrid coaches) in 2011-12 i.e. prior to the completion of oscillation trials and obligatory approval of the RDSO. This utilization was not in order as it would compromise passenger safety as RDSO's obligatory approval was awaited. Further, ICF Administration's decision to procure more than minimum requirement of Air spring sets resulted in excess procurement and idling of inventory (Air spring sets -187 Nos) worth ₹7.46 crore for three years. Despite Railway Board instructions

and non-completion of oscillation trials by RDSO for their obligatory approval, ICF issued (2011-12) 136 coach sets of Air springs for fitting in IRCTC[301] coaches and LHB Hybrid coaches that was a serious compromise with passenger safety. Balance 187 coach sets of Air springs valuing ₹ 7.46 crore were lying as surplus for the previous three years.

- ICF completed manufacturing of EMU rakes for Mumbai Rail Vikas Corporation (MRVC) Project in 2011-12 except five EMU rakes. These five rakes were planned for production with high speed SIEMENS bogies involving new technology. As such, RDSO's approval to the prototype coach was mandatory. Since the prototype could not be cleared by the RDSO, five EMU rakes were not manufactured. ICF, however had procured (June/August 2010) electric traction motors valuing ₹69.96 crore for these EMU rakes. The procurement of inventory prior to approval of prototype was not regular resulting in idling of inventory worth ₹69.96 crore for more than three years.

5.2.2.1.8 Human Resource Management

5.2.2.1.8.1 Estimation of man-hours required for production

The 'allowed time' required for the completion of a job is determined on the basis of work and motion study. Thus 'allowed time' is the basis for the payment of incentive and estimation for the requirement of outsourcing. ICF made projections every year of man hours required duly considering the available manhours with reference to the production programme. The requirement of man hours over and above the available man hours was proposed to be outsourced.

Table 5.9

S. No.	Details	2009-10	2010-11	2011-12	2012-13
1	Initial target for production of coaches	1511	1600	1578	1600
2	Actual production of coaches	1433	1503	1511	1620
3	Man hour projected for targeted production adopting 'allowed time'	27295545	28168080	24991345	25782743
4	Man hours required for actual production adopting 'allowed time'	25255634	25150045	23832844	25312444
5	Man hours provided by ICF staff	13564619	12839089	12084746	11886612
6	Man hours outsourced	5552723	5258613	5131390	6429544
7	Total man hours utilized in ICF and outsourced.(5 + 6)	19117342	18097702	17216136	18316156
8	Percentage of variation between actual requirement and time utilized {(4-7)/4} X100	24.30	28.04	27.76	27.64

(Source- Annual Production Programmers approved by Railway Board, Monthly Outturn Statements, Annual proposals of man hours to be outsourced and Details of actual outsourced man hours utilized)

From the above it is seen that man hours required for actual production based on 'allowed time' was 24 to 28 *per cent* higher than the total manhours actually

[301] Indian Railway Catering & Touring Corporation

utilized for production. Further, the manhours made available by the ICF staff decreased from 1.36 crore hours in 2009-10 to 1.19 crore hours in 2012-13, shortfall being 12.50 *per cent*. The man hours outsourced increased substantially (0.13 crore hours) in 2012-13 i.e. 25 *per cent* in comparison to 2011-12. The main reasons identified in Audit for such variations was that ICF standardized the man hours for carrying out various jobs during 1960's which formed the basis for the 'allowed time'. The 'allowed time' had not been revised with modernization and up-gradation of infrastructure[302] and worker's skill. No real time study/in-motion study/work measurement was conducted to assess the actual time required to carry out a specified work.

5.2.2.1.8.2 Overtime booking

The workers posted in Shops in which incentive scheme is applicable are termed as Incentive workers. As per codal provisions[303], no worker covered by the incentive scheme is to be allowed overtime during the same period.

Audit noticed (2013) that ICF Administration was booking for overtime the staff posted in Shops under incentive scheme and payment of overtime allowance was being made to them as detailed below:

Table 5.10 (in ₹ crore)

Year	Incentive paid to staff of Incentive Shops	Total Over Time paid in ICF	Over Time paid to staff of Incentive Shops	Percentage of Over Time paid to staff of Incentive Shop
2009-10	27.61	22.26	20.30	91.19
2010-11	37.68	10.55	8.65	81.99
2011-12	37.18	8.35	6.28	75.21
2012-13	37.81	14.19	12.24	86.26
Total	139.28	55.35	47.47	

(Source- Details of monthly payments of incentives and overtime in ICF)

From above it is observed that an amount of ₹47.47 crore had been paid as overtime allowance during the period under review to the workers who were governed by the incentive scheme. The payment was resorted to as a regular measure and not on special consideration. This activity was against the codal provisions and instructions issued by Railway Board (January 2013).

5.2.2.1.8.3 Ratio of Direct Workers to Essential Indirect Workers

As per codal provisions[304], the strength of unskilled staff engaged as indirect workers including Essential Indirect Workers (EIW[305]) should range from 10 to 25 *per cent* of the total strength (including Direct workers[306]).

Audit observed (2013) that in ICF, out of 28 Shops under incentive scheme the strength of EIWs to direct workers ranged from 27 to 144 *per cent* in 14 Shops.

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[302] Installation of new machines under various machine & Plant Programmes, Mumbai Rail Vikas Corporation Project, Paint Shed Project etc.
[303] Paragraph No.426 of Indian Railway Code for Mechanical Department (Workshops)
[304] Paragraph No.431 of Indian Railway code for the Mechanical Department
[305] Like lifting of material and tools to production booths and operation of fork treucks etc
[306] Directly involved in process of manufacture

The operation of EIWs in excess of prescribed percentage increases the cost of production of coaches at ICF due to increased overheads.

5.2.3 Conclusion

Railway Board delayed the finalization of annual Production Programmes of ICF, the delays ranged between one and two years. Besides, the ICF also finalized their tentative Production Programmes with uniform delay of around one year. As a result, the timely availability of long lead stock items could not be ensured. This adversely impacted the production of heavy build coaches. Consequently, heavy build coaches were manufactured less than target and to utilize the available production capacity, ICF had to manufacture more conventional coaches. This action of the ICF was against the objective of phasing out of conventional coaches. Also the frequent changes in Production Programmes together with changes in designs resulted in heavy accumulation of inventory. Procurement of same item of stores on more than one occasion also resulted in extra expenditure. Moreover, ICF failed to achieve the approved annual production targets in terms of ECU, except for 2012-13, resulting in shortfall in production valuing ₹760.71crore.

The labour and overhead costs were higher in ICF due to which the unit cost of manufacture of common types of coaches was higher in comparison to RCF, Kapurthala. For identical level of production, the man power utilized in ICF was 60 *per cent* more than RCF, Kapurthala. There were many batch orders for small quantities of coaches that required more set up time and consequent enhanced 'allowed time' enhancing the overheads. ICF had been making no analysis of various inputs to contain the manufacturing cost. The overheads ranged between 124 and 160 *per cent* of direct cost for Factory/ Administrative overheads. The operation of Essential Indirect Workers in excess of prescribed percentage was also contributing to high overheads.

ICF Administration had no effective control over inventory as the turn over ratio was more than prescribed target of 12 *per cent* every year. The value of stock held at the end of financial years (2009 -10 to 2012-13) ranged between ₹222.41 crore and ₹282.01 crore showing that the material required for implementing its annual Production Plan had not been assessed accurately.

Appendix-I

List of 30 stock items whose procurement was made at higher rate at short interval

SI. No	Description of the material	Excess Payment (in lakh of ₹)
1.	Draw Gear General Arrangement	6.98
2.	End Construction for GS coach	132.67
3.	SS Sheet 0.8x1250x1900mm	1.61
4.	Brake Head	12.36
5.	Driver's Cabin Door	0.53
6.	Doorway Pillar Frame	4.51
7.	Handle EMU	0.68
8.	Lever Inner & Outer	9.57
9.	Body Bolster DMC/TC	13.36
10.	Side Buffer Arrangement	74.28
11.	Partition Frame, Lavatory & Water Tank	3.30
12.	Ventilator Grill	0.28
13.	Collar for DI MOU Roller Bearing	12.32
14.	Fully Machined Axle box rear cover	4.99
15.	Steel Flats 40x10mm	2.73
16.	One cross section of end part	19.43
17.	Equallsing Stay	3.28
18.	Electrode Wire	1.61
19.	Vertical Damper	15.19
20.	Hanger	5.26
21.	Axie Box Housing	8.83
22.	Corro. Res. SS coil 5x125xRoll	45.49
23.	Axle Box Housing	48.62
24.	Block Hanger	2.33
25.	Spring Steel Rounds 36x4230mm	4.40
26.	Steel Rounds 40mm dia	1.09
27.	SS Sheet, 1.7x1180x3135mm	4.90
28.	Lateral Damper	17.14
29.	CRF Light Rail for 6 door Shells	2.74
30.	MS Square Tube 20x20x1.6mm	3.24
	Total	**₹463.72 say ₹4.64 crore**

Appendix-II

Details of eight non-moving stock items test-checked where inventory was held up due to changes in design/change in production programme

S. No.	Items	Remarks
1.	FRP BODY SIDE WINDOW ASSY (30305428810101)	This item was procured for MEMU & DMU coaches but rendered surplus due to change in design. Decision has been taken to modify the surplus for in conventional coaches.
2.	ALU.CHEQ SHEET 2.03X1084X2830 (30309461160101)	This item was procured for LHB Hybrid coaches but rendered surplus due to change in production program, Decision has been taken to use the surplus in conventional coaches.
3.	FRP ROOF PANEL (30309462560101)	As against item 2 above.
4.	FRP SIDE, END WALL PART. & MOULDING (30314201630301	This item was procured for MRVC coaches. No MRVC coaches were turned out in 2012-13. During, 2013-14, four sets will be used and balance five sets will be used if manufacture of AC EMU coaches is planned.
5.	PANELS & MOULDING FOR ROOF (30314402530301)	This item was procured for MRVC coaches. No MRVC coaches were turned out in 2012-13. The surplus item will be utilized if MRVC coaches are taken up for production.
6.	PANELS & MOULDING FOR ROOF (30314402770301)	This item became surplus due change in design. The use of this surplus item in AC EMU coaches will be explored after consultation with design section..
7.	PANELS & MOULDING FOR ROOF (30304361990101)	As against item 6 above.
8.	ALUMINIUM INNER FRAME 4 FEET (30305488100101)	This item was procured for KSTDC coaches. The surplus stock cannot be used in other coaches as the size of the item is unconventional.

5.3 Working of Rail Wheel Factory, Yelahanka, Bangalore

5.3.1 Introduction

Rail Wheel Factory (RWF), Yelahanka commissioned in 1984 is a Production unit under the Indian Railways (IR) and is engaged in the production of wheels, axles and wheel sets of railroad wagons, coaches and locomotives for the use of IR. After meeting the internal demand of Railways, RWF was also exporting the same to the select overseas customers such as USA, Malaysia, Sudan, Angola, Mozambique, Senegal and Mali upto 2009-10. However, due to growing internal demand of Indian Railways export has been stopped subsequently. The Plant is certified as compliants to ISO-9001 in 1994 and ISO-14001 in 1999 standards by M/s. Bureau Veritas Quality International (BVQI) France. It was also certified in 1995 to conform to the Quality Assurance Program of Association of American Railroad (AAR) in respect of manufacture of new wheels and axles.

RWF comprises three shops namely Wheel shop, Axle Shop, Wheel set assembly shop which has an annual capacity of producing 2,00,000 wheels, 48,000 axles and 64,000 wheel sets (2011-12) respectively. Railway Board fixes the annual targets for production based on the capacity of the plant, man-power available and requirements received from Production Units and Zonal Railways. Based on the yearly targets fixed, a monthly production programme is drawn by RWF.

RWF is under the administrative control of Member Mechanical at the Railway Board level. At Zonal level, it is headed by a General Manager who is assisted by Financial Advisor & Chief Accounts Officer, Chief Mechanical Engineer, Controller of Stores, Chief Engineer (Civil Engineering Department), Chief Electrical Engineer, Chief Personnel Officer and Security Commissioner.

The audit of RWF was conducted from May 2013 to September 2013 in order to see whether efficient management was in place for optimum utilization of resources (raw materials, plant and machinery), Rules, regulations and instructions issued from time to time relating to planning, procurement and production were complied with and justification as envisaged in the Augmentation Scheme - Phase II had been achieved.

Audit reviewed the records for the period from 2010-11 to 2012-13 maintained at RWF. Discussions were held with the Officers and supervisors of RWF wherever required. Entry conference was held with the General Manager/ RWF in May 2013 and Exit conference in September 2013. In the Entry Conference the audit entity was briefed about the audit objectives and scope and in the Exit Conference, all the observations were discussed. The replies of the GM have been suitably incorporated in the respective paras.

The Provisional Paragraph was issued (April 2014) to Railway Board and the reply from Ministry of Railways (Railway Board) was received on 30 July 2014 and has been incorporated suitably.

5.3.2 Audit Findings

5.3.2.1 Planning

Planning is vital for the efficient functioning of any organization. Mechanical Department of the Railway Board is responsible for the planning process for the production of wheels, axles and wheel sets. It fixes the production target of RWF every year based on the demand sent to Railway Board (Stores Directorate) by 31st July of the previous year for wheels, axles and wheel sets by the Zonal Railways and production units such as Rail Coach Factory, Kapurthala and Integral Coach Factory, Perambur. Modifications made by Railway Board from time to time also need to be taken into account by RWF in the process of planning.

Wheel Tyre Axle (WTA) allotment meetings are held, every quarter by Additional Member/Production Unit (Railway Board) with the representatives of Rail Wheel Factory. The requirements of scrap by RWF along with the constraints faced by RWF in the production process are highlighted during the meeting.

On the basis of above meeting quarterly allotments[307] are communicated to RWF by Railway Board to enable them to draw the monthly production programme. RWF issues Work Orders on its various shops (Wheel Shops, Axle shops and Assembly Shops) every month for production based on these decisions.

5.3.2.2 Excess/ Irregular production of Wheels

The Production target of Wheels/Axles/Wheel sets by RWF is guided by the annual target fixed by Railway Board and quarterly Wheel Tyre Axle (WTA) allotments. While the annual target fixed by Railway Board covers all types of Wheels, the quarterly WTA allotments and monthly production programme are type specific Viz, BOXN wheels 840 dia wheels, Electric Multiple Unit wheels, Metre Gauge wheels, Broad Gauge Loco wheels, etc. and the consignee is specified in the WTA allotments.

Audit analyzed the targets for production and the achievements as given below:-

Table 5.11 - Targets and production achieved

Year	Description	Target	Production	Difference	% of variation
2007-08	Wheels	130047	147007	+16960	13.04
	Axles	52492	52870	+378	0.72
	Wheel sets	37584	40509	+2925	7.78
2008-09	Wheels	180000	196261	+16261	9.03
	Axles	65826	84428	+18602	28.26
	Wheel sets	57500	64673	+7173	12.47
2009-10	Wheels	186000	187450	+1450	0.78

[307] Quarterly Wheel Tyre Axle (WTA) Allotments: meeting are held every quarter in which the total requirement for zonal railways and production units are discussed and planned, the position regarding the quantities allotted vis-à-vis actual supplies and the requirement of scrap by RWF is also discussed in the WTA meetings.

	Axles	70320	65302	-5018	-7.17
	Wheel sets	60500	55940	-4560	-7.14
2010-11	Wheels	180000	180810	+810	0.45
	Axles	85720	88481	+2761	3.22
	Wheel sets	61000	61281	+281	0.46
2011-12	Wheels	200000	201135	+1135	0.56
	Axles	98800	100504	+1704	1.72
	Wheel sets	68158	70315	+2157	3.2
2012-13	Wheels	200000	191501	-8499	-4.24
	Axles	105600	100001	- 5599	-5.30
	Wheel sets	73000	60100	- 12900	-17.67

(Source: Annual Outturn statements of RWF)

Analysis by audit of quantities produced by RWF revealed the following:

- The production of Wheels exceeded the target fixed by Railway Board, ranging from 0.45 *per cent* to 13.04 *per cent* during the period from 2007-08 to 2011-12. However, the production was less than the target by 4.24 *per cent* in 2012-13. Similarly the target for Axles also exceeded ranging from 0.72 *per cent* to 28.26 *per cent* from 2007-08 to 2011-12, except in 2009-10 where the production was less by 7.17 *per cent*. The production of axles was also less than the target by 5.30 *per cent* during 2012-13. In the case of wheel sets the production exceeded the targets ranging from 0.46 *per cent* to 12.47 *per cent* during 2007-08 to 2011-12. However, the production of Wheel sets was less by 7.17 *per cent* and 17.67 *per cent* during 2009-10 and 2012-13. On examination of records it was found that

  (a) During 2012-13 the production of wheels was less than the target and the shortfall was due to shut down of the plant for three weeks for annual maintenance.

  (b) Axle production was less during 2009-10, due to breakdown of Long Forging Machine from January 2010 to May 2010 and during 2012-13 the shortfall was on account of non-availability of outsourced[308] axles.

  (c) Shortage of wheel sets during 2009-10 was due to the less production of axles as the Long Forging Machine was under major breakdown from January 2010 to May 2010 and during 2012-13 shortage was attributed to unrealistic fixation of target by Railway Board as per the noting on the file by Chief Mechanical Engineer/RWF.

- The production in excess of targets fixed, resulted in stock piling, at RWF, every year averaging to the extent of 22255 wheels and axles during 2010-13. This also led to blocking of capital to the extent of ₹75.71crore on an average and resulted in avoidable dividend liability[309] of ₹11.34 crore to the Government of India by Indian Railways (2010-13). The lopsided production

[308] As plant capacity is 48,000 axles per annum, forged axles are procured from M/s. Visvesvaraya Iron and Steel Limited, Bhadravathi (M/s.VISL) and M/s. Metal Steel Factory, Ishapur(M/s.MSF).
[309] The Dividend on the capital outlay on the railways which is payable to the General Revenues.

pattern and ad-hoc supplies to Zonal Railways have resulted in stock piling of inventory at RWF. ***(Annexure V)***

- RWF supplied wheels to Zonal Railways/ Production Units in excess of allotments decided during the quarterly WTA meetings. This resulted in excess supply of 20066[310] wheels and resulted in stock piling by Zonal Railways/Production Units.

Audit analysed the achievement of production targets of various wheel types against the quantities planned. This is given in the table below:

Table 5.12 - WTA allotments of wheels, production and supplies during 2010-13.

	2010-11			2011-12			2012-13		
WHEEL TYPE	**TOTAL WTA PLANNED**	**ACTUAL PRODUCTION**	**QTY SUPPLIED**	**TOTAL WTA PLANNED**	**ACTUAL PRODUCTION**	**QTY SUPPLIED**	**TOTAL WTA PLANNED**	**ACTUAL PRODUCTION**	**QTY SUPPLIED**
BOXN	145370	114163	137416	155400	156948	153811	109215	123418	101907
BG COACHING	65454	56122	54775	46284	39504	41686	58099	50775	47731
WHEELS FOR BVZI	500	0	0	0	0	0	0	0	0
840 DIA	1673	6059	1436	2030	3083	2220	3090	9952	2762
BG LOCO	7238	0	1666	0	0	0	10778	659	7438
BG EMU	4500	1757	1362	0	209	0	8520	5563	5562
LHB	0	53	0	0	76	0	0	0	0
DSL LOCO	0	1648	0	0	0	0	0	0	0
MG Coaching	4440	1008	816	1717	1315	934	750	1134	674
TOTAL	229175	180810	197471	205431	201135	198651	190452	191501	166074

(Source: Figures under col.3 and 4 extracted from outturn statements of RWF for the year 2010-13 and Minutes of WTA Quarterly meetings)

Audit analysis of the allotment, production and supply for the period from 2010-13 revealed that

A. 2010-11

(a) As against the WTA allotment of 145370 BOXN wheels RWF produced 114163 wheels. RWF had dispatched 137416 wheels during the year.

(b) The production in respect of 840 dia Wheels (6059 Nos) was more than the requirement (1673 Nos,). Despite the excess production, quantity supplied to the various units was less than the allotment of wheels. Reasons for this decision are not available on record.

[310] 2010-11: 8372 wheels,2011-12: 6731 wheels, 2012-13: 4963 wheels

c) In respect of BG Coaching, EMU and MG Coaching wheels, it was seen that the supplies were far below the planned allotments. It was also noticed in audit that the supplies made were less than the quantity produced resulting in huge shortfall in supply vis-à-vis production.

(c) Audit noticed that 1666 BG loco wheels have been supplied against allotment of 7238 nos., though there was no production of the same during 2010-11, implying that the wheels produced previously were dispatched during 2010-11.

B. 2011-12

(a) A total number of 155400 BOXN wheels were planned, against which only 153811 were dispatched by RWF, though the production was 156948 nos. The justification in depriving the allottees of the allotment as per WTA plan was not available on records

(b) BG Coaching Wheels of 41686 were supplied as against the WTA plan allotment of 46284 wheels but the production for the year was only 39504 indicating that production was not made with reference to WTA allotment

(c) Under 840 dia, audit noticed that the supply (2220 Nos) was more than the allotment (2030 Nos.); also the production (3083 Nos.) during the year was more than the requirement. Since 840 dia wheels are manufactured on demand by CONCOR and other PSUs, there should not have been excess production without reference to demands.

(d) The total WTA requirement was 205431 for all types of wheels against which only 198651 were supplied. The production during the year was 201135 wheels. Though the production was higher during the year the supplies made were less for which the reasons were not placed on record.

C. 2012-13

(a) 840 dia wheels: As the production of previous years exceeded the requirements, the production of 840 dia wheels again during 2012-13 resulted in further increase of inventory balance as the WTA allotments could be met with the wheels which were produced in excess during 2010-11 and 2011-12. During 2013-14, RWF decided (May 2013) not to supply any wheels to PSUs in view of the Central Excise Duty Notification[311]. This will result in permanent excess inventory of 1424 wheels at RWF amounting to ₹ 4.41 crore. Hence RWF needs to take immediate decision for utilization of these wheels, as these wheels were produced for PSUs. In view of non-utilization of this inventory RWF is liable to pay dividend to Government of India until the inventory is cleared.

[311] As per latest Central excise notification, Production Unit in Railways are exempted from payment of Excise Duty on scrap as long as the entire activity is for purpose of meeting captive requirement of Indian Railways. If any non Railway orders are executed, this exemption gets withdrawn, irrespective of the size and volume of non Railway order and ED is attracted on the entire scrap generated.

(b) The total BOXN WTA allotment during the year was 109215 wheels against which 123418 have been produced. The supply was only 101907 resulted in stock piling of 14203 wheels.

The excess production of wheels has also resulted in incentive payments and also Overtime allowance to the staff as commented in Para 5.3.2.6.3 and Para 5.3.2.6.4 respectively.

General Manager in the exit conference stated that there are lot of constraints leading to short supply to zones and excess production of certain type of wheels and instructed the mechanical department of RWF to give detailed reply to this aspect.

RWF could not implement the production plan drawn up by Railway Board in consultation with RWF itself. While the overall targets (2010-13) fixed by Railway Board were exceeded for individual types of wheels, RWF could not adhere to the production plans. This led to increased inventory for some types of wheels like 840 dia and shortages in BOXN, BG coaching, BG Loco, EMU and MG coaching wheels. This in turn is likely to have an adverse impact on the production and maintenance of coaches and wagons. Thus planning of production activities by RWF was very poor. Above analysis has revealed that production on many occasions was not done with reference to the WTA allotments. The lopsided production pattern and ad-hoc supplies to Zonal Railways have resulted in stock piling of inventory at RWF and the Zones as mentioned earlier in para.

Railway Board also could not monitor implementation of its plan by RWF.

5.3.2.3 Augmentation Phase II

a) Railway Board sanctioned the Augmentation (Phase II) of RWF at a cost of ₹47.71 crore during July 1999 for enhancing production from 1 lakh to 1.15 lakh wheels. Railway Board advised RWF to further augment the capacity from 1.15 lakh to 2 lakh during April 2007 through Material Modification.

During the proposal stage for Material modification (May 2007), FA & CAO/RWF had stated that in view of general buoyancy in the economy, it was necessary that the viability of the investment with the latest available data be reviewed at Railway Board's level duly considering the anticipated production from Chappra[312] Wheel Plant.

Audit observed that this aspect was not taken into account while seeking approval for the Material Modification on the ground that the modification was to de-bottleneck the critical areas in wheel production at RWF. The Augmentation Phase II including Material Modification was sanctioned by Railway Board during July 2007 for enhancing the production of Wheels from 1.15 lakh to 2 lakh by 2009 for a total amount of ₹99.44 crore (including the original cost of Augmentation Phase II)

[312] Chappra Wheel Plant is another Production Unit under Indian Railways for producing wheels only. The construction of the Factory started during July 2008 and aimed for producing 1 lakh wheels per annum.

Further, review of the records reveals that the financial progress under the Augmentation was ₹ 68.81 crore (69 *per cent*) and the physical progress was 75 *per cent* approximately as on March 2013.

In order to complete the Augmentation Phase II (Material Modification) works in a meaningful way and to sustain the capacity of 2 lakh wheels, RWF proposed (May 2013) to enhance the sanction from ₹99.44 crore to ₹117.11 crore.

Audit noticed that during 2011-12 and 2012-13, total casting of wheels exceeded the target of 2 lakh , by 8412 and 6356 of wheels respectively, with the machines sanctioned in the original scope. However, as brought out in Para 5.3.2.2 the production was lopsided in many instances resulting in short supply/excess supply with reference to WTA allotments.

Since this objective of the Phase II has already been achieved even before completion of the Augmentation Phase II and the development of the Chhapra Wheel Plant, the need for further extension to the Material Modification is not justified.

b) Further audit scrutiny revealed that RWF had requested (May 2011) for dropping 10 machines proposed to be purchased costing ₹13.35 crore from the scope of Material modification, citing that no progress has been achieved (May 2011) for procurement of these machines. This indicates that Planning and proposal initially made were not in tune with the long term requirement.

It is also seen that one of the machines costing ₹3.48 crore (Special purpose machine-online) was proposed to be dropped justifying that RWF had already adequate offline machining capacity in house. However, RWF had outsourced a lot of machining works citing insufficient in-house capacity for machining and to meet the annual target. Review of outsourcing of machining of wheels and axles during 2010-11 to 2012-13 was made and it was seen that 11 contracts valuing ₹2.01 crore had been awarded for machining works during these years. Since the procurement of the Special Purpose online machine was dropped citing availability of adequate machining capacity in-house, the incurring of expenditure on outsourced machining is not justified.

5.3.2.4 Unfruitful expenditure of Capital Equipment

In order to avoid enormous manual work, reduce chances of errors in measurement, and effectively reduce the man-power in the Inspection Cell of wheel shop at RWF. Two Automatic Wheel Dimension Measurement equipments were procured from M/s. Prodigy Labs Pvt. Ltd., Bangalore (March 2009) at a cost of ₹ 0.46 crore.

The equipments were commissioned in October 2010 after conducting Performance Guarantee Test and acceptance by user department. After working barely for three months, the equipments went out of order in January 2011. The supplier could not attend to the warranty complaints as the equipments had been dismantled by RWF. The firm requested restoration of the machine to enable them to attend to the issues raised. Physical verification by audit confirmed that the equipments had been dismantled.

Despite repeated requests from the supplier to restore the equipments for attending to the issues, RWF was yet to comply with the same (July 2014). The dismantling of the equipments by RWF, during warranty period, deprived them benefits of warranty. Secondly since the equipments were not working for more than 4 years, the entire investment was rendered unfruitful and also resulted in non-accrual of ancillary benefits viz., reduction in manpower, error free measurements, avoiding of tools and handling activities.

Ministry of Railways (Railway Board) in their reply (July 2014) stated that the machine worked for about six months only after commissioning and after that did not work. Despite best effort by RWF to get it rectified, the machine could not be attended to since there was no response from the firm. The firm has subsequently closed and despite efforts to chase the personnel who were working with the firm, there has been no progress. The reply is not acceptable as the firm had stated (February 2011) that their engineers had noticed removal of the lights and frames from its place resulting in its non-functioning. The firm requested restoration of the machine to enable them to attend to the issues raised. RWF is yet to restore the machine and get it functional.

Fig. 5.2 - Photos showing dismantled wheel dimension equipments

5.3.2.5 Transportation of Scrap by Road

(a) Steel scrap is the main raw material required for the production of wheels and the requirement of steel scrap (condemned wheel disc, rails, axles etc.,) is met by scrap generated by Zonal Railways/ Production Units. Zonal Railways/production units transported steel scrap to RWF through rail transport in piecemeal wagons[313] as well as dispatch through road. Railway Board had permitted the Zonal Railways for transporting scrap through road/rail transport (March 2009) due to the shortages of wagons.

Analysis of records on transportation contracts at RWF revealed the following:

Transportation by road had increased considerably over the period (2008-13). The main reason attributed by RWF for switching over to road transport was scarcity of wagons. Analysis by audit revealed that RWF incurred ₹146.15 crore (approx.) on road transportation during 2010-13 citing difficulties in getting wagons in time and to ensure timely despatch of railway materials.

[313] Piece meal wagon means a rake lesser than the stipulated composition of 59 wagons.

Review by audit of the wagon holding position of South Western Railway (SWR) for the months from April 2012 to December 2012 revealed a daily average holding position[314] of 73 wagons. Further, wagons were placed by South Western Railway as and when required/demanded by RWF except on 2 to 3 occasions. As such, opting for road transportation citing non–availability of wagons was not justified, especially as transportation by rail was 1.6 times cheaper than by road and RWF being an integral part of Indian Railways, should have given priority to rail transport for transporting scrap/wheel sets etc., railway materials.

As seen from the records relating to Augmentation of infrastructure facilities for enabling smoother movement of steel scrap and WTA items by road (Extension of new scrap pre- conditioning bay and parking lots B and C) was taken up from September 2011 at an estimated cost of ₹7.58 crore by RWF. The work was taken up through two contracts and ₹6.16 crore had so far been incurred on the work. The augmentation work was exclusively for facilitation of road transport of scrap to RWF and carrying Wheels, Axles and Wheel sets from RWF.

General Manager in the exit conference stated that (September 2013) the system of transportation has been streamlined and they were now targeting 70 *per cent* movement of railway materials by rail transport. He added that road transportation is not being resorted to in a routine manner as done earlier.

Audit, however noticed that for the period April - August 2013 only 41 *per cent* of scrap and 59 *per cent* of wheel sets were transported by rail, whereas wheels and axles were completely transported by road. This indicates the overdependence of a railway production unit on road transport, despite availability of infrastructure for transportation through rail.

Ministry of Railways (Railway Board) in their reply (July2014) accepted the fact of dependence on road transport and stated that due to restriction of piecemeal loading and wherever formation of rake load is not possible, dependence of road transport cannot be avoided. It was also stated that RWF is making concerted efforts for transportation of goods in rake loads, which is evident from the fact that 58 *per cent* of dispatches of wheel sets were by rail during 2013-14.

5.3.2.6 Financial Management

5.3.2.6.1 Short receipt of scrap

Scrap for wheel casting in RWF is generated internally with Indian Railway. While dispatching the scrap the Zonal Railways/Production Units prepared sale issue vouchers and forward to RWF duly indicating the quantity and value of the materials dispatch for acceptance of debits[315] of the value of the material.

RWF (Accounts Wing) prepares the Transfer Certificates (TCs) every month, after checking the details, quantity, rate, description etc mentioned in the Sale issue vouchers sent by each Zonal Railways/Production Units and forwards the TCs to

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[314] Daily average holding means census taken for daily availability of wagons for loading purpose

[315] Transaction between Zonal Railways/Production Units are made through Book Adjustment.

Stores Depot at RWF to check and certify the actually quantity of scrap received and accounted. The Sr.Materials Manager/General Stores Depot returns the TCs to FA & CAO/RWF after verifying the quantities, duly recording the difference, if any. In case of shortage, RWF has to re-debit the Zonal Railway/Production Unit concerned for the quantity short received.

Audit observed that receipts of scrap amounting to ₹1313.64 crore were accepted during 2010-13. A test check[316] by audit revealed short receipt of scrap valued at ₹10.34 crore indicating possibility of pilferage. The actual extent of short receipt is likely to be much higher. Though the short receipts of scrap had been intimated by the Sr.Materials Manager/General Stores Depot to FA&CAO/RWF, no action was taken to reconcile the difference or to investigate the reasons for such short receipts.

Though Audit has highlighted the issue of non-reconciliation earlier no action has been taken by RWF for reconciliation of the short receipt of scrap. Audit recommends that full scale review of all such cases needs to be undertaken to assess the total quantity of short receipt of scrap. Since the Transfer Certificates for the original value of scrap as mentioned by Zonal Railways were accepted and no action had been taken with the concerned railways for the quantity short received, the expenditure on scrap to that extent would be irregular. Non-reconciliation of short receipt of scraps has resulted in increasing the cost of wheels as the value of the short received quantity was absorbed by the wheels produced. The laxity clearly indicates lack of internal controls at all levels.

Financial Advisor and Chief Accounts Officer (FA&CAO) stated in the exit conference that this will be looked into and action will be initiated at the earliest

Ministry of Railways (Railway Board) in their reply (July2014) accepted the fact of dependence on road transport and stated that due to restriction of piecemeal loading and wherever formation of rake load is not possible, dependence of road transport cannot be avoided. It was also stated that RWF is making concerted efforts for transportation of goods in rake loads, which is evident from the fact that 58 *per cent* of dispatches of wheel sets were by rail during 2013-14.

5.3.2.6.2 Procurement of Mould Blanks –Faulty planning

(a) Graphite Mould Blanks (GMB) are an imported item. GMBs of various sizes, viz., 43.5"[317], 48.5"[318] are used for manufacturing of wheels. Wheels are cast in graphite moulds which are pre-heated and sprayed. After allowing for a pre-determined setting time the mould is split and the wheel taken out of the mould.

The average consumption norm for 43.5" Graphite Mould Blanks (GMB) is 3.60 nos. per 1000 wheels of type 840 dia/ BG Coaching. The procurement of 43.5"mould blanks was not commensurate with the requirement. Due to non availability of 43.5" GMBs, RWF resorted to convert 71 numbers of 48.5" GMBs to 43.5" moulds for casting wheels leading to loss of ₹0.98 crore, as detailed

[316] where the difference in the quantity received at RWF was more than 10 metric tonnes was selected for review

[317] 43.5" GMB is used for casting 840 dia wheels and BGC wheels

[318] 48.5" GMB is used for casting BOXN wheels

below:

Table 5.13

Year	No. of 48.5"Moulds converted to 43.5" moulds	Book Average Rate[319] of 48.5" moulds (Rs.)	Book Average rate of 43.5" moulds (Rs.)	Difference in Book Average Rates Col(3)-Col.(4)	Loss due to conversion
1	2	3	4	5	6
2010-11	13	403988.88	338371.21	65617.67	853029
2011-12	0	0	0	0	0
2012-13	58	584885.59	430643.58	154242	8946036
TOTAL	**71**		**97,99,065**		

(Source: Mould repair room records and stores office records)

This loss could have been avoided, had procurement of 43.5" GMB been better planned. During the exit conference the Railway Administration stated that the options were either to lose production or to consume excess number of GMB. Hence, they opted for conversion to continue the production process. Audit scrutiny revealed that the Railway Board production target for BG Loco (which requires usage of 43.5" GMB) during 2012-13 was 7500 wheels which was later enhanced to 10778 wheels on WTA allotment. In respect of BG Coaching the Railway Board target during 2012-13 was 33500 whereas WTA allotment was 58099. There were no reasons on record for increase in allotments by WTA. Due to sudden increase in targets, conversion of GMBs was resorted to. As GMBs are long lead [320]imported item, RWF should have intimated Railway Board about the shortage of 43.5" mould blanks and resulting loss due to conversion.

Audit noticed that the production of BOXN wheels during 2011-12 and 2012-13 were in excess of the WTA allotments, implying that the procurement of 48.5" GMBs were in excess of requirement. GMBs being costly imported item, RWF did not plan the procurement properly thus leading to conversion of 48.5" mould blanks for casting wheels for 840 dia /BG Coaching. While it is a fact that the need for GMBs increased due to sudden extra demand placed on RWF by Railway Board, however the fact remains that 48.5" GMBs were lying in stock at RWF in excess of requirement of production in RWF. This is despite the fact that BOXN wheels were produced in excess during 2011-12 and 2012-13.

(b) Excess consumption of Graphite mould blanks

The accepted consumption norm for 48.5" Graphite Mould Blanks (GMB) in RWF is 1.88 nos. per 1000 wheels of type BOXN. It was observed that average consumption of GMB per 1000 wheels was much higher during the period 2010-13 ranging from 2.1 to 4.63 per1000 wheels. It was noticed that GMBs were stored in open condition and were continuously exposed to moisture, rain, sun, etc., which

[319] Book Average Rate is the rate arrived at by dividing the value balance shown in the Priced Ledger by the quantity balance.

[320] Long lead items means – the items for which the procurement period is long.

was one of the reason for the reduction in their life and consequential excess consumption.

Audit analysis revealed that value of the excess GMBs consumed during the last three years was to the order of ₹1.27 crore. Mould Blanks, being an imported costly item, proper storing facilities should have been made available to avoid reduction of their life span.

5.3.2.6.3 Payment of Incentive Bonus

To sustain production levels, generally an Incentive Bonus is given to the staff. The Incentive Bonus paid to the staff of RWF is linked to the Standard Plant Capacity (SPC) fixed for it.

The SPC of a plant depends on both the capital equipment available and availability of manpower. Any increase in plant capacity adversely impacts the incentive bonus paid to the staff. At the request of the Railway Board the National Productivity Council[321] conducted a detailed study in 1999 and fixed norms for the manpower required to operate the available machinery in a scientific manner. Thus, the SPC of the plant was fixed at 8300 wheels and 4200 axles per month. The SPC was subsequently revised to 8475 wheels and 4230 axles in 2003 due to augmentation of plant capacity.

Railway Board decided to raise the rate of Incentive Bonus paid to the staff with effect from June 2009 with the condition that there should be an improvement in productivity of 5 *per cent*. Accordingly a Committee was nominated by the GM/RWF in November 2009 to refix the SPC after taking into account augmentation in the Plant Capacity. The Committee examined the issue keeping in view the report of the National Productivity Council in 1999. The Committee recommended upward revision of the SPC to 9860 wheels and 4800 axles per month with effect from December 2009. RWF, however, did not accept the recommendations of the Committee and instead based on the negotiations with the Staff Council, fixed (March 2010) the SPC as 8899 wheels and 4442 axles per month.

A comparison of the annual production with the SPC fixed is given below:

Table 5.14 (In Units)

Year	Description	Annual Production	Standard Plant Capacity (annual) Monthly plant Capacityx12	Difference with reference to SPC
2006-07	Wheels	126126	101700	+24426
	Axles	58259	50760	+7499
2007-08	Wheels	147007	101700	+45307
	Axles	52870	50760	+2110

(Source: Out turn statements)

[321] "NPC is a national level organization under the Ministry of Commerce and Industry, Government of India, providing training, consultancy and undertaking research in the area of productivity.

Audit observed the following:

As can be seen from the above table, the SPC fixed in March 2010 based on negotiations with Staff Council was much below the annual production capacity of the plant.

Non fixing of the SPC of the plant on a scientific basis and at a level less than the average monthly production of the plant resulted in fixation of SPC of RWF plant on the lower side. This resulted in payment of extra incentive bonus to the tune of ₹3.35 crore (Approx) during the period 2010-13.

Ministry of Railways (Railway Board) in their reply (July 2014) stated that it was communicated to RWF to increase productivity by 5 *per cent* and introduction of revised bonus factor doubling the existing one. Thus, Standard Plant Capacity increased by 5 *per cent* without any increase in standard man-hours and incentive rates were revised.

The reply is not tenable. Contrary to Railway Board's instruction to review incentive scheme on yearly basis considering all functions and innovations introduced in the process of manufacture, resulting in augmentation of production, RWF simply computed SPC by adding 5 *per cent* to their existing capacity. As a result SPC was determined even below the actual production and avoidable payment of incentive bonus made as brought out in the para above.

5.3.2.6.4 Overtime

Instructions of Railway Board stipulate that in RWF overtime[322] booking in sections covered under Incentive Scheme should be eliminated completely (December 1999).

Wheel Production, Wheel maintenance, Axle Forge Production, Axle Forge Maintenance, Axle Machine Shop Production, Axle Machine Shop Maintenance, General Maintenance are the units in RWF covered under the 'Incentive Scheme'. Examination of records by audit revealed that overtime booking continued in the sections covered under the Incentive Scheme and ₹5.47 crore was paid towards overtime allowance during the years 2010-13.

It was stated in the exit conference that 'overtime' was booked only for maintenance staff. However, on scrutiny of records it was noticed that overtime had been paid to both production and maintenance staff.

Railway Board in their reply (July2014) stated that RWF is having Group Incentive Scheme and not Chittaranjan Locomotive Works (CLW) pattern of Incentive Scheme. In 1999, primarily only CLW type of incentive Scheme was predominant and therefore, instructions mainly relate to that type of incentive scheme. The over time is paid only for urgent situation and to achieve the out turn fixed for RWF. Over time is regulated with utmost consciousness,

[322] Particulars of all extra hours of work done by a Railway employee beyond prescribed roistered hours.

The reply of Railway Board is not tenable as payment of overtime is in total contravention to Railway Board's order. Board's instructions dated 17 December 1999 addressed to GM/RWF for complete elimination of overtime booking in sections covered under incentive scheme has also been reiterated by the Review committee. These instructions have not been implemented

5.3.2.6.5 Loss due to non-segregation of water supply connection

RWF gets water supply through one 300 mm dia water supply connection from Bangalore Water Supply and Sewerage Board (BWSSB) for the requirement of factory and housing colonies. The Bangalore Water Supply Regulations 1965, (Rule 35) provides that when water supplied is used partly for domestic and partly for non-domestic purpose and connections are not segregated, the water supply engineer, after necessary investigation has to determine the percentage of water used for domestic/ non-domestic purpose and preferred the bills accordingly.

Review of the water bills paid to BWSSB during 2010-13 revealed that even as 70 *per cent* of the water received from BWSSB was being used for domestic purposes over the years, no action was taken to segregate domestic/nondomestic connections or to get the billing done as per BWSSB Regulations. This resulted in excess payment of water charges to the extent of ₹1.91crore for 2010-13. Till remedial action is taken this recurring loss will continue.

It was stated by Chief Engineer during exit conference that though BWSSB was approached in February 2011 and May 2011 for segregation, they were reluctant to segregate billing for domestic and non-domestic purpose as this would lead to loss for BWSSB. As the BWSSB act provides for segregation or to get the billing done based on approximate assessment by BWSSB engineer, RWF needs to pursue its case with BWSSB to get the benefit of reduced rates for domestic consumption.

Ministry of Railways (Railway Board) in their reply stated (July 2014) that the issue of installation of separate water meter for domestic and non-domestic connection for plant and colonies is being chased regularly with the officials of BWSSB but efforts have not yielded any result. The fact remains that there is recurring loss due to non-availing of the benefit of reduced rates for domestic consumption of water.

5.3.3 Conclusion

- RWF focused primarily on achieving/ exceeding the annual production targets fixed by Railway Board without reference to actual requirement of types of wheels as allotted by WTA. Planning for production and distribution was not as per WTA allotment. Accordingly, it was unable to meet production targets for BG loco wheels, MG Loco wheels and exceeded production of BOXN wheels and 840 dia wheels etc. This has also resulted in avoidable payment of dividend to Government of India because of stock piling. This lack of synchronization between its WTA allotments and production resulted in stock piling of inventory of certain types of wheels. These issues occurred, despite the participation of RWF in the planning process at the Railway Board level.
- The proposal for Extended Material Modification for Augmentation Phase II was not a well considered decision in view of the fact that part of the demand

for wheels by the Zonal Railways would be met by the upcoming Chhapra Wheel Plant.

- Improper planning of procurement of Graphite Mould Blanks (GMB) resulted in conversion of 48.5"GMB to 43.5"GMB.
- Intrinsic weaknesses in Financial Management were noticed viz.,

a) Non-reconciliation of quantities of scrap as mentioned in the Transfer Certificate with reference to the actual quantities received in stores and expenditure booked on scrap, which consequently resulted in increasing the cost of wheels, clearly indicating lack of internal control.

b) Non-revision of the Standard Plant Capacity based on the annual production capacity of the Plant in a scientific manner, considering the greater mechanization that had taken place under the augmentation scheme.

(Suman Saxena)

New Delhi **Deputy Comptroller and Auditor General**

Dated: 30 October 2014

Countersigned

(Shashi Kant Sharma)

New Delhi **Comptroller and Auditor General of India**

Dated: 31 October 2014

Annexure- I
(Para 3.1.6)
Sample selection of MM works reviewed

Sl. No.	Railway	Name of original project	Cost (₹ in crore)	Name of MM projects	Cost of MM projects (₹ in crore)
1	Eastern	Lakshmikantapur – Namkhana NL (46.61 kms.)	100.89	1) Namkhana –Chandranagar NL (14 kms.)	78.9
				2) Kakdwip – Budakhali NL (5 kms.)	61.85
				3) Chandranagar – Bakhali NL (17.2 kms.)	165.35
		Tarakeshwar – Bishnupur NL (85 kms.)	479.20	1) Tarakeswar – Dhaniakhali NL (19 kms.)	133.58
				2) Arambagh – Irphala NL (18.3 kms.)	149.53
				3) Irphala – Ghatal NL (11.2 kms.)	95
				4) Arambagh – Champadanga NL (23.3 kms.)	288.81
		Manderhill – Dumka – Rampurhat NL (130 kms.)	259.34	Rampurhat – Murarai 3rd line (29.48 kms.)	224.05
		Tarakeshwar – Magra NL (51.95 kms.)	365.17	Tarakeshwar – Furfura Sharif NL (21.75 kms.)	162.37
		Bardhaman – Katwa G.C. (51.22 kms.)	245.15	1) Katwa – Bazarsau DL (30.59 kms.)	271.39
				2) Katwa (Dainhat) – Manteswar NL (34.4 kms.)	256.2
				3) Negum – Mangalkot NL (8.60 kms.)	251.5
				4) Manteswar – Memari NL (35.6 kms.)	82.11
		New Alipur – Akra DL (9.76 kms.)	18.09	1) Budge Budge – Pujali NL (11.0 kms.)	97.17
				3) Pujali – Uluberia (Birshivpur) NL (10.25 kms.)	295.84
				3) Pujali – Bakrahat NL (9.75 kms.)	83.48
		Sonarpur – Ghutiarisarif DL (14.96 kms.)	30.47	Kalikapur – Minakhan via Ghatakpukur NL (38.0 kms.)	268.55
		Chandpara – Bongaon DL (9.77 kms.)	22.23	1) Bongaon – Chandabazar NL (11.5 kms.)	57.16
				2) Bongaon – Poramaheshtala NL (20 kms.)	140.81
				3) Chandabazar – Bagdah NL (13.86 kms.)	117.77
		Chinpai – Sainthia DL (31.61 kms.)	86.66	1) Prantik – Suri NL (33.98 kms.)	149.55
				2) Chowrigacha – Sainthia via Kandi NL (56.50 kms.)	302.15
		Dakshin Barasat – Laxmikantapur DL (19.68 kms.)	119.05	1) Joynagar – Raidighi NL (20.0 kms.)	140.46
				2) Joynagar – Durgapur NL (32.0 kms.)	273.87
		Shantipur – Kalinarayanpur DL	104.80	Ranaghat (Aranghata) – Duttaphulia NL (8.17 kms.)	69.76
		Katwa – Patuli DL (17.70 kms.)	121.95	Ahmedpur – Katwa G.C. (51.92 kms.)	357.08
		Sondalia – Champapukur DL (23.64 kms.)	136.55	Bira – Chakla NL (11.5 kms.)	129.97
		Dankuni – Chandanpur 4th line (25.41 kms.)	198.88	Baruipara – Furfura Sharif NL (12.30 kms.)	97.56
		Krishnanagar – Kalinarayanpur DL (21.99 kms.)	43.49	1) Krishnanagar – Shantipur G.C. (15.29 kms.)	34.86
				2) Krishnanagar City (Dhubulia) – Charatala NL (13.0 kms.)	119.38
		Deoghar – Sultanganj NL (117.125 kms.)	282.00	1) Banka – Barahat NL (15.53 kms.)	312.00
				2) Banka – Bitia Road NL (22 kms.)	N.A.

2	East Central	Restoration of dismantled line of Fatuha-Islampur (42.41 kms.)	49.50	1) Daniawan to Biharsharif NL (38.28 Km)	104.79
				2) Biharsharif to Barbigha NL (26 Km)	103.86
				3) Barbigha to Sheikhpura NL (26 Km)	516.41
				4) Neora/Danapur to Daniawan NL (36 Km)	
		Mansi-Saharsa G.C. (43.61 kms.)	48.39	1) Saharsa-Dauram Madhepura G.C.	40.19
				2) Dauram Madhepura-Purnia G.C.	129.75
				3) Construction of new bridge no. 53 on permanent diversion and allied work in Mansi-Badala ghat section	4.27
				4) Banmankhi-Bihariganj G.C.	36.80
				5) Construction of guide bund of bridge no. 45,50,52 and 53.	8.16
				6) Removal of cause ways between Saharsa-Purnia	2.39
3	East Coast	Raipur- Titlagarh DL (203 Km)	758.10	1) Mandirhasaud - New Raipur NL (20 Km.)	100.00
				2) Gauge Conversion of Kendri - Dhamtari including Abhanpur - Rajim (67.20 Km.)	283.85
4	Northern	Utratia-Sultanpur-Zafarabad DL (148 Kms.)	369.90	1) Akbarganj -Rae Bareli NL (46.90 Kms)	295.67
				2) Sultanpur - Amethi NL (29.22 Kms)	153.83
5	North Eastern	Kanpur-Kasganj-Bareilly & Kasganj-Mathura G.C. (458 Kms.)	658.11	Bareilly to Lalkuan G.C. (83.85Kms)	133.93
		Maharajganj-Masrakh NL (35.49 Kms.)	54.35	Masrakh to Rewa Ghat NL (30 Kms.)	83.77
6	North East Frontier	G.C. of Katihar-Jogbani including Katihar- Barsoi-Radhikapur (200 Kms.)	402.98	1) Katihar-Tejnarayanpur G.C. (34 Kms.)	65.08
				2) Conversion of MG coaching depot at Katihar	10.99
				3) Raiganj-Dalkhola NL (43.43 Kms.)	291.53
		Eklakhi-Balurghat NL (86.75 Kms.)	36.38	1) Itahar-Raiganj NL (21.82 Kms.)	129.30
				2) Itahar-Buniadpur NL (39 Kms.)	287.94
		G.C. of New Jalpaiguri-Siliguri Jn.-New Bongaigaon along with Branch Line (417.07 Kms.).	123.88	1) Chalsa-Naxal NL (16 Kms.)	292.93
				2) Rajabhatkhowa-Jainti NL (15.13 Kms.)	180.16
		Lumding-Silchar G.C. (198 Kms.)	648.00	1) Baraigram-Dullabchera G.C, (29.4 Kms.)	103.84
				2) Karimganj-Mahishasan G.C. (10.3 Kms.)	55.00
7	North Western	Udaipur – Chittaurgarh – Ajmer G.C.(300 Kms.)	433.39	1) Udaipur – Umra Gauge Conversion (10.50 kms.)	21.79
				2) Mavli – Nathdwara Gauge Conversion (15.27 kms.)	31.94
				3) Mavli–Badisadri Gauge Conversion (82.01kms.)	290.66
				4) Nathdwara – New Nathdwara New Line (10.80kms.)	107.19
		Rewari – Sadulpur G.C. (141 kms.)	243.19	Sadulpur – Hissar G.C. (70 kms)	121.00

8	Southern	Tiruchchirappalli – Thanjavur-Nagore-Karaikal G.C. (135 Kms)	109.05	1) Nagore-Karaikal NL (11Kms)	33.78
				2) Nagapattinam-Velankanni NL (10 Kms)	23.69
				3) Nagapattinam-Tiruthuraipundi NL (35 Kms)	126.14
				4) Karikkal – Peralam NL (23 Kms)	110.19
				5) Additional facilities at Nagore and Nagapattinam	4.17
		Mayiladuthurai-Thiruvarur-Karaikudi and Tiruthuraipundi-Agasthiampalli G.C. (223.69 Kms)	404.19	1) Restoration of dismantled line Nidamangalam-Mannargudi (13.25 Kms)	62.17
				2) Mannargudi-Pattukkottai NL (41 Kms)	215.59
				3) Thanjavur-Pattukkottai NL (47 Kms)	290.05
9	South Central	Jaggayapeta-Mellacheruvu New Line (19.1 km)	53.21	Mellacheruvu-Janpahad New Line (24 km)	174.56
10	South Eastern	Bankura – Damodar River Railway G.C.Project (96.60 kms)	111.90	1) Rainagar – Masagram NL (20.9 kms)	46.25
				2) Bankura (Chhatna)- Mukutmonipur NL (48.25 kms)	85.63
				3) Bowaichandi - Khana NL (24.40 kms)	81.38
				4) Mukutmonipur - Uparsol NL (26.7 kms)	211.51
				5) Bankura (Kalabati) – Purulia via Hura NL (65 kms)	294.89
				6) Mukutmonipur – Jhilimili NL (24 kms)	239.36
		Howrah- Amta New BG line with a branch line from Bargachia - Champadanga (73.66 kms)	154.30	1) Champadanga - Tarakeswar NL (8 kms)	141.93
				2) Amta - Bagnan NL (15.8 kms)	
				3) Janghipara to Furfura Sharif NL (12.3 kms)	97.23
		Tamluk-Digha NL (88.9 kms)	293.97	1) Deshpran to Nandigram NL (17 kms)	121.43
				2) Kanthi to Egra NL (26.2 kms)	247.27
				3) Nandigram to Kandiamari NL (7 kms)	75.62
				4) Nandakumar to Balaipanda NL (27 kms)	275.14
		Digha –Jaleswar (41 kms) New Line	352.65	Digha – Egra NL (31 kms)	298.52
11	South East Central	Gauge Conversion of Jabalpur – Gondia section (285.45 kms)	1037.90	Katangi - Tirodi NL (15.36 Km)	119.64
12	Western	Rajkot –Veraval G.C. (185 kms)	100.00	1) Wanasjaliya to Jetalsar G.C. (90.66 Kms)	98.00
				2) Somnath to Veraval NL (5.02 Kms)	14.52
				3) Shapur – Saradiya G.C. (46 Km)	196.30
				4) Somnath to Kodinar NL (36.91 km)	252.68
		Bhildi – Viramgam Gauge conversion (157 kms)	155.66	Mahesana-Taranga hill G.C. (57.4 kms)	191.14
	38	**Total**	**9212.92**	**91**	**13383.86**

Note: 1. Eastern Railway - Original work-16, cost Rs.2613.92 crore, MM work-32, cost Rs.5268.06 crore
2. South Eastern Rwilway- Original work-4, cost Rs.912.82 crore, MM work-14, cost rs.2216.16 crore
Total of Eastern and South Eastern Rlys comes to - 20 main works costing-Rs.3526.74 crore and 46 MM work costing-Rs.7484.22 crore

Out of 42 ongoing works, 38 on going works were selected (including 8 old works of Railway Audit Report No.9 of 2004)- 75 per cent of works selected for Eastern, South Eastern and Northeast Frontier Railways and for other Zonal Railways 100 per cent of works have been selected.

Annexure I I

(Para 5.1.2.1)

Statement showing expected arising vis-à-vis target and achievement of sale of scrap

(₹ in crore)

Name of the Zonal Railway	Year	Expected arising intimated by zonal railways to Railway Board	Initial target fixed by Railway Board for zonal railways	Revised mid-term assesment of arising of scrap by Zonal Railways	Revised target fixed by Railway Board for Zonal railways	Actually achieved by zonal railways	Excess/ Shortfall w.r.t revised target/initial target (in case of non-availability of revised target)	Reasons for Shortfall/ Excess	Remarks	Percentage of achievement w.r.t initial target	Percentage of achievement w.r.t revised target
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	11	12
NWR	2010-11	121.00	262.00	300.00	300.00	400.12	100.12	More scrap available for auction.	Nil	152.72	133.37
	2011-12	125.00	294.00	155.00	194.00	204.85	10.85	More scrap available for auction.	Nil	69.68	105.60
	2012-13	121.00	225.00	160.00	160.00	166.68	6.68	More scrap available for auction.	Nil	74.08	104.17
WR	2010-11	160.00	287.00	NA	307.00	330.28	23.28	More scrap available for auction.		115.08	107.58
	2011-12	255.00	280.00	NA	320.00	346.15	26.15	More scrap available for auction.		123.63	108.17
	2012-13	255.00	355.00	NA	275.00	233.36	-41.64	Sudden fall of steel market		65.74	84.86
WCR	2010-11	102.00	254.00	NA	290.00	298.13	8.13	Scrap material from Engg. Deptt. was increased		117.37	102.80
	2011-12	210.00	214.00	NA	225.00	299.82	74.82	Scrap material from Engg. Deptt./ Mechanical Deptt. was increased and rate of Iron & steel was also increased.		140.10	133.25
	2012-13	180.00	258.00	NA	220.00	233.86	13.86	Target acheived in excess of (+) 13.86 crore due to material received from Engg. Deptt.		90.64	106.30
CR	2010-11	136.88	254.00	NA	272.00	276.90	4.90	_		109.02	101.80
	2011-12	170.00	249.00	NA	NA	255.73	6.73	_		102.70	0.00
	2012-13	155.33	285.00	NA	256.00	239.37	-16.63	Slow down of economy leading to very low demand for scrap.		83.99	93.50
SCR	2010-11	NA	282.00	173.30	302.00	335.20	33.20	Excess achievement was due to higher market price.	-	118.87	110.99
	2011-12	190.79	317.00	190.79	317.00	321.21	4.21	Excess achievement was due to higher market price.		101.33	101.33
	2012-13	257.60	346.00	257.60	320.00	325.16	5.16	Excess achievement was due to higher market price.		93.98	101.61
SECR	2010-11	97.21	187.00	199.00	230.00	265.44	35.44	Excess arising due to scrap material from Engg. & Mech. Dept.		141.95	115.41

Name of the Zonal Railway	Year	Expected arising intimated by zonal railways to Railway Board	Initial target fixed by Railway Board for zonal railways	Revised mid-term assesment of arising of scrap by Zonal Railways	Revised target fixed by Railway Board for Zonal railways	Actually achieved by zonal railways	Excess/ Shortfall w.r.t revised target/initial target (in case of non-availability of revised target)	Reasons for Shortfall/ Excess	Remarks	Percentage of achievement w.r.t initial target	Percentage of achievement w.r.t revised target
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	11	12
	2011-12	87.57	150.00	150.00	150.00	133.12	-16.88	Less arising of scrap	However during the review of cumulative Statement for the month of Mar-2012 (Statement-II) of Dy.CMM(S)/GSD/ Raipur, it was noticed that Rails,other P.way materials,depot ferrous,4 Nos. of wagons, 1 coach,misc. depot misc. Division scrap of 2934.415 MT to tatal value of ` 8.23 crore were lying undisposed	88.75	88.75
	2012-13	81.67	140.00	140.00	140.00	146.65	6.65	Excess arising due to scrap material from Engg. & Mech. Dept.		104.75	104.75
SR	2010-11	147.00	312.00	147.00	334.00	347.20	13.20		Reasons not on record	111.28	103.95
	2011-12	218.00	297.00	267.00	297.00	342.24	45.24		Reasons not on record	115.23	115.23
	2012-13	199.00	303.00	199.00	295.00	280.73	-14.27	due to poor demand and power crisis in southern states	Reasons not on record	92.65	95.16
NR	2010-11	205.00	357.00	390.00	400.00	423.29	23.29	More scrap available for auction.	The excess/Shortfall is compared with original target fixed by Rly Board.	118.57	105.82
	2011-12	320.00	350.00	325.00	385.00	461.00	76.00	More scrap available for auction.	The excess/Shortfall is compared with original target fixed by Rly Board.	131.71	119.74
	2012-13	330.00	471.00	415.00	415.00	415.00	0.00	Due to less offering of scrap, non- auction of offered lots.	The excess/Shortfall is compared with original target fixed by Rly Board.	88.11	100.00
SWR	2010-11	100.00	177.00	NA	189.00	156.82	-32.18	__	Nil.	88.60	82.97
	2011-12	100.00	101.00	NA	NA	104.25	3.25	__	No mid term revision was made.	103.22	0.00
	2012-13	75.00	112.00	NA	NA	112.34	0.34	__	No mid term revision was made.	100.30	0.00

Name of the Zonal Railway	Year	Expected arising intimated by zonal railways to Railway Board	Initial target fixed by Railway Board for zonal railways	Revised mid-term assesment of arising of scrap by Zonal Railways	Revised target fixed by Railway Board for Zonal railways	Actually achieved by zonal railways	Excess/ Shortfall w.r.t revised target/initial target (in case of non-availability of revised target)	Reasons for Shortfall/ Excess	Remarks	Percentage of achievement w.r.t initial target	Percentage of achievement w.r.t revised target
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	11	12
NCR	2010-11	205.00	262.00	205.00	300.00	218.07	-81.93	Not found on record		83.23	72.69
	2011-12	157.00	240.00	157.00	240.00	243.21	3.21	Not found on record		101.34	101.34
	2012-13	184.00	279.00	200.00	210.00	213.92	3.92	Not found on record		76.67	101.87
ECR	2010-11	0.00	133.00	NA	NA	137.83	4.83	Excess arising of scrap	Not available	103.63	0.00
	2011-12		130.00	NA	NA	154.10	24.10	Excess arising of scrap	Not available	118.54	0.00
	2012-13		158.00	NA	NA	165.74	7.74	Excess arising of scrap	Not available	104.90	0.00
ER	2010-11	197.00	255.00	NA	300.00	386.98	86.98	Due to excess arising		151.76	128.99
	2011-12	190.48	273.00	NA	320.00	352.98	32.98	Due to excess arising		129.30	110.31
	2012-13	214.00	272.00	NA	260.00	244.59	-15.41	Due to short arising		89.92	94.07
NER	2010-11	95.00	148.00	138.00	148.00	195.23	47.23	Due to excess arising		131.91	131.91
	2011-12	95.00	158.00	150.00	158.00	160.26	2.26	Due to excess arising		101.43	101.43
	2012-13	120.00	150.00	150.00	150.00	154.68	4.68	Due to excess arising		103.12	103.12
ECOR	2010-11	100.00	77.00	NA	NA	107.69	30.69	Not available.	Nil	139.86	0.00
	2011-12	100.00	107.70	NA	NA	113.24	5.54	Not available.	Nil	105.14	0.00
	2012-13	77.30	108.00	NA	NA	110.48	2.48	Not available.	Nil	102.30	0.00
NFR	2010-11	54.30	86.00	NA	92.00	83.78	-8.22	Due to less offering of scrap material to COS for disposal	Due to less offering of scrap material to COS for disposal	97.42	91.07
	2011-12	65.00	126.00	NA	80.00	90.81	10.81	Not available.	Not available.	72.07	113.51
	2012-13	75.00	102.00	NA	102.00	103.58	1.58	Not available.	Not available.	101.55	101.55
SER	2010-11	150.00	289.00	NA	309.00	326.00	17.00	Not available.	Excess	112.80	105.50
	2011-12	181.00	215.00	NA	275.00	289.53	14.53	Not available.	Excess	134.67	105.28
	2012-13	216.00	268.00	NA	255.00	255.15	0.15	Not available.	Excess	95.21	100.06
MR	2010-11	2.00	3.00	Nil	Nil	3.20	0.20	Sufficient materials available	No mid-term assessment made.	106.67	0.00
	2011-12	1.60	2.00	Nil	Nil	1.49	-0.51	Adequate materials not available	No mid-term assessment made.	74.50	0.00
	2012-13	2.00	2.00	Nil	Nil	2.46	0.46	Materials available.	No mid-term assessment made.	123.00	0.00

Name of the Zonal Railway	Year	Expected arising intimated by zonal railways to Railway Board	Initial target fixed by Railway Board for zonal railways	Revised mid-term assesment of arising of scrap by Zonal Railways	Revised target fixed by Railway Board for Zonal railways	Actually achieved by zonal railways	Excess/ Shortfall w.r.t revised target/initial target (in case of non-availability of revised target)	Reasons for Shortfall/ Excess	Remarks	Percentage of achievement w.r.t initial target	Percentage of achievement w.r.t revised target
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	11	12
CLW/ CRJ	2010-11	15.28	15.00	NA	NA	16.07	1.07	No bid and rejection of lots due to unsatisfactory rate.	No midterm assessment was done.	107.13	0.00
	2011-12	15.72	14.00	NA	NA	16.63	2.63	No bid and rejection of lots due to unsatisfactory rate.		118.79	0.00
	2012-13	14.38	14.00	NA	NA	13.39	-0.61	No bid and rejection of lots due to unsatisfactory rate.		95.64	0.00
DLW/ BSB	2010-11	2.69	3.00	NA	NA	4.43	1.43	Target fixed less than what it should be	Inadequate expected arising intimated by DLW to Railway.	147.61	0.00
	2011-12	3.27	3.00	NA	NA	4.27	1.27	Target fixed less than what it should be	Inadequate expected arising intimated by DLW to Railway.	142.46	0.00
	2012-13	3.00	3.00	NA	NA	4.86	1.86	Target fixed less than what it should be	Inadequate expected arising intimated by DLW to Railway.	162.02	0.00
ICF/ Chennai	2010-11	17.00	18.00	NA	19.00	21.19	2.19	Excess Effort		117.72	111.53
	2011-12	19.62	25.00	NA	25.00	26.68	1.68	Excess Effort		106.72	106.72
	2012-13	22.00	22.00	25.00	25.00	26.26	1.26	Excess Effort		119.36	105.04
RWF/ YNK	2010-11	16.17	13.00	NA	NA	14.72	1.72	--	--	113.23	0.00
	2011-12	19.49	11.00	NA	20.00	20.39	0.39	--	--	185.36	101.95
	2012-13	14.63	17.00	NA	NA	20.38	3.38	--	--	119.88	0.00
RCF/ Kapurthala	2010-11	14.99	14.00	NA	NA	15.01	1.01			107.21	0.00
	2011-12	15.00	15.00	NA	NA	16.84	1.84			112.27	0.00
	2012-13	15.50	15.00	NA	NA	16.45	1.45			109.67	0.00
DMW/ PTA	2010-11	30.71	34.00	31.44	34.00	44.44	10.44			130.71	130.71
	2011-12	32.45	40.00	32.45	40.00	42.03	2.03			105.08	105.08
	2012-13	37.25	35.00	35.77	35.00	48.50	13.50			138.57	138.57
	TOTAL	**7190.87**	**11273.70**	**4593.35**	**9990.00**	**11942.44**	**643.74**				

NA indicates that targets were not revised, Nil indicates that there was no revised target.

Annexure-III

Para 5.1.2.2

Statement showing projection of P.Way scrap in the estimate vis-a-vis actual release

Name of the railway	Name of division/ Construction unit	Details of selected CTR/TRR/GC work	Projected in the Estimate				Actual release				Difference in projection and release				Reasons for difference, if any	Remarks
			Rails				Rails				Rails					
			Quantity (in MT)		Value in (Rs.)		Quantity (in MT)		Value in (Rs.)		Quantity (in MT)		Value in (Rs.)			
			Second Hand	Unserviceable	Second Hand	Unserviceable	Second Hand	Unserviceable	Second Hand	Unserviceable	Second Hand('-' denote excess & '+' denote shortage)	Unserviceable('-' denote excess & '+' denote shortage)	Second Hand('-' denote excess & '+' denote shortage)	Unserviceable('-' denote excess & '+' denote shortage)		
1	2	3	4	5	6	7	8.000	9	10.00	11.00	12	13	14	15	16	17
NWR	Bikaner Div.	TRR(P) of 24.30 Kms. on Main line of ROK-BNW section km. 0.80 to 25.10 with 52 kg rails.	1516.320	1010.880	46077932	9636719	2627.422	0	79842100.00	0.00	-1111.102	1010.880	-33764168.00	9636719.00	Due to actual scope of work 100.222 MT excess rail was released.	-
		21 KM CTR from Km. 163.60 to 142.60 between HSR-BTI section.	1612.000	490.710	31917600	4677938	1526.863	532.189	30231886.00	5073357.00	85.137	-41.479	1685714.00	-395419.00	In the estimate all the quantity of release rails was projected as 52kg, whereas at the time of execution the work 10577.84 meter rail was released as 90R and 30587.30 meter rail was released as 52kg, hence difference in quantity in weight is arise.	
	Bikaner (Const.)	SRPR-SGNR GC project	0	7931.000	0	77775895	135.551	8720.825	1329213.00	85516410.00	-135.551	-789.825	-1329213.00	-7740515.00	Due to actually inventory of section and release of 90R Rail from BNSR yard from Non Interlocking work which is not projected in the estimate Total 844.570 MT excess quantity of released Rails of various gauge are released from the SRPR-SGNR GC work in comparision to projected quantity in the estimate.	
	Jodhpur Div.	CTR 14.66 KM MTD-MEC Section	0	1302.100	0	23177380	0.000	1271.389	0.00	22630724.00	0.000	30.711	0.00	546656.00		-
		TRR(S) of 2.255km in NAC yard & GVMR yard MTD-FL Section	0	200.29	0	3565162	0.000	88.562	0.00	1576404.00	0.000	111.728	0.00	1988758.00		-
WR	Ahmedabad	CTR-10.00 Kms Bet NRD-DBO Km-386/3-396/3	0	740	0	6625960	0.000	762	0.00	6824112.00	0.000	-22.000	0.00	-198152.00		
	Mumbai Central	CTR wrork VR-ST CTR 3.26 kms	83	21	2866240	385840	15.000	124	0.00	0.00	68.000	-103.643	*	*		* Actual value of released naterial not made available.
	Ahmedabad	Mehsana- Taranga Hill-TRR-54.83,TSR-56.35 Kms.	0	2718	0	23646600	0.000	2262	0.00	48018576.43	0.000	456.410	0.00	-24371976.43	App.80% work done physically due to higher rate received	
	Mumbai Central	CCG-VR- TRR 22.86 km.	2743	0	104864306	0	1151.000	1592	43990484.00	33265459.16	1592.000	-1592.440	60873822.00	-33265459.16	*	
	Pratap Nagar	PRTN-CTD GC 52 kg rails	0	4216	0	37750064	0.000	5127	0.00	112665640.95	0.000	-910.637	0.00	-74915576.95	**	NA= not available
WCR	KOTA	CTR KTT-GGC Sec. - 21.52 TKM	1342.84	895.23	26718646.66	12533248	2041.980	127.57	40629518.12	1785983.99	-699.140	767.660	-13910871.46	10747264.01	(**)Due to site condition of the work	
		CTR-KTT-MTJ section - 10.36 TKM Under SSE(PW) IDG	104	862	936000	7240800	13.884	391.289	124956.00	3286827.60	90.116	470.711	811044.00	3953972.40	**	
	Bhopal	BPL-BIN-TRR-9.70Tkms	0.000	1164.000	0	27354000	0.000	1017.57	0.00	23912895.00	0.000	146.430	0.00	3441105.00	Less work carried out as per site condition	
		ET-BPL-TRR-8.53 TKMs	443.560	443.560	15081040	9314760	29.365	82.307	998426.00	2488313.00	414.195	361.253	14082614.00	6826447.00	Less work carried out as per site condition	

Name of the railway	Name of division/ Construction unit	Details of selected CTR/TRR/GC work	Projected in the Estimate				Actual release				Difference in projection and release				Reasons for difference, if any	Remarks
			Rails				Rails				Rails					
			Quantity (in MT)		Value in (Rs.)		Quantity (in MT)		Value in (Rs.)		Quantity (in MT)		Value in (Rs.)			
			Second Hand	Unserviceable	Second Hand	Unserviceable	Second Hand	Unserviceable	Second Hand	Unserviceable	Second Hand('-' denote excess & '+' denote shortage)	Unserviceable('-' denote excess & '+' denote shortage)	Second Hand('-' denote excess & '+' denote shortage)	Unserviceable('-' denote excess & '+' denote shortage)		
1	2	3	4	5	6	7	8.000	9	10.00	11.00	12	13	14	15	16	17
CR	Mumbai	TRR KYN- IGP Km 69.00 - 74.00 = 5 Km Up	0	520	0	13429000	0.000	520	0.00	13429000.00	0.000	0.000	0.00	0.00		
		CTR (P) KYN- IGP Km-121.00- 125.14 = 4.14 Km Dn. Road	0	430.56	0	11194076	0.000	420.16	0.00	10923697.82	0.000	10.400	0.00	270378.18	4.14 km included two turn outs - TG-III which are sold separately.	
	Nagpur	TRR 22.60 kms. from 830-852.600 DN line on WR-BPQ section	2350.4	0	21101000		1280.340	1073.597	20521903.00		-3.537	0.000	-579097.00		Reasons not found on record.	Projection in FWP was Rs.21922000 which was revised to Rs.21101000 as per CR.
		CTR 28.26 kms. upline NGP CKNI (FWP 199/00-01).	2939.04	0	60132000		744.281	2147.53	57073503.00		47.229	0.000	3058497.00		Reasons not found on record.	Projection in FWP was Rs. 54768000 which was revised to Rs. 60132000 as per CR.
	Solapur	Latur-Miraj GC work	0	12767.111		214852882		12767.111		214852882.00	0.000	0.000	0.00	0.00		
SCR	secuderabad	TRR (P) between KZJ-KI	0	1715.096	0	43456306	0.000	1715.096	0.00	43456306.00	0.000	0.000	0.00	0.00		
	secuderabad	CTR (P) between KZJ-KI	0	**1608.071**	0	40303186	0.000	1608.071	0.00	40303186.00	0.000	0.000	0.00	0.00		
	Vijayawada	CTR (P) between BZA-GDR	0	1014.637	0	16822662	0.000	1014.637	0.00	16822662.00	0.000	0.000	0.00	0.00		
	Vijayawada	TRR (P) between BZA-GDR														
	CN/TPTY	GC work between DMM-PAK	0	11937.239	0	198898276	0.000	13019.57	0.00	216932075.34	0.000	-1082.331	0.00	-18033799.34	The difference is due to non-accountal of 90R and 52 kg rails at the time projection.	
SECR	Bilaspur	Est. No. 01/BSP/2011 (CTR)	235	235	8983245	4534795	367.173	77.985	9878058.00	2098030.00	-132.173	157.015	-894813.00	2436765.00		
	Bilaspur	Est. No. 13/BSP/2010 (TRR)	179.23	179.23	6851466	6009860	112.700	243.51	3031969.00	6087750.00	66.530	-64.280	3819497.00	-77890.00		
	Raipur	Est. No. 16/R/09 (Rev. 89/R/10)-(CTR)	546	546	21397986	15261792	1758.690	231.94	68923853.00	7831097.00	-1212.690	314.060	-47525867.00	7430695.00		
	Raipur	Est. No. 01/R/08 (CTR)	212	212	7027800	4028000	889.930	0	29501179.00	0.00	-677.930	212.000	-22473379.00	4028000.00		
	Nagpur	Est **Pt. I** -No.01/G-BTC/ GC/99 (Rev. G-BTC/GCE-2010) (GC) **Pt.II-** 7-C/2001(Rev. 7-C/ 2010)	2147	0	46092150	0	0.000	3889.081	0.00	83484913.00	2147.000	-3889.081	46092150.00	-83484913.00		Separate records was not maintained for released SH and US rail .
SR	Chennai	Chennai - Arakkonam sectionCTR (P)15.14 km,TRR(0.76KM)	1080.54	463.0851	36196022.92	6946335	762.150	633.314	25530500.70	13632123.81	318.390	-170.229	10665522.22	-6685788.81	UNREALISTIC ESTIMATION	
		CHENNAI ARAKKONAM TRR(P)-6.042KM	411.21	176.23	15719243	2819711	0.000	695.856	0.00	18468022.00	411.210	-519.626	15719243.00	-15648311.00	UNREALISTIC ESTIMATION	
	Madurai	MDU-MEJ TRR(P)3.901KMS	267	114	10206609	1824000	395.955	0	15136171.79	0.00	-128.955	114.000	-4929562.79	1824000.00	UNREALISTIC ESTIMATION	
		DG-MDU TRR(P)-12.1KM	1183	0	39628134	0	0.000	1261.48448		35292415.23	1183.000	-1261.484	39628134.00	-35292415.23	UNREALISTIC ESTIMATION	
		GC	0	10372.0062	0	202254121.1	0.000	8068	0.00	181811890.50	**0.000**	2304.006	0.00	20442230.60	UNREALISTIC ESTIMATION	
NR	Ferozpur	CTR(P) Km. 52.82	0	5472.5	0	129462363	2832.640	1731.31	58383543.00	32262811.00	-2832.640	3741.190	-58383543.00	97199552.00	showing short in material statement	
	Ferozpur	TRR(P) Km. 33.06	0	2949.61	0	60794412	0.000	2949.56	0.00	60794412.00	0.000	0.050	0.00	0.00		
	Lucknow (LKO)	TRR(P) Km. 14.89 (FD)	1006.56	542	38450592	11171162	576.249	902.041	22012712.00	18591967.00	430.311	-360.041	16437880.00	-7420805.00	Work for 0.646 kms was short done and weight was assessed 52 kg instead of standard weight @ 51.89 kg./ mtr	
	Lucknow (LKO)	CTR (P) 16.70 km	1028.2	553.64	34444700	9984897	1478.480	0	51636722.00	0.00	-450.28	553.640	-17192022.00	9984897.00	Work for 0.78 km short done	

Name of the railway	Name of division/ Construction unit	Details of selected CTR/TRR/GC work	Projected in the Estimate				Actual release				Difference in projection and release				Reasons for difference, if any	Remarks
			Rails				Rails				Rails					
			Quantity (in MT)		Value in (Rs.)		Quantity (in MT)		Value in (Rs.)		Quantity (in MT)		Value in (Rs.)			
			Second Hand	Unserviceable	Second Hand	Unserviceable	Second Hand	Unserviceable	Second Hand	Unserviceable	Second Hand('-' denote excess & '+' denote shortage)	Unserviceable('-' denote excess & '+' denote shortage)	Second Hand('-' denote excess & '+' denote shortage)	Unserviceable('-' denote excess & '+' denote shortage)		
1	2	3	4	5	6	7	8.000	9	10.00	11.00	12	13	14	15	16	17
SWR	Hubli / Division	UBL-LD Section CTR (P) - 28.74 Km, TRR(S)-3.00 Km.	**710**	**2384**	**24459500**	**38148432**	**1765.920**	**1505.981**	**60835944.00**	**24095696.00**	-1055.92	878.019	-36376444.00	14052736.00	**NAV**	--
	Hubli / Division	Bellary - Rayadurga section - TRR (p) for a length of 13.60 km between	**0**	**1411.408**	**0**	**40037122**	**448.952**	**882.25**	**12735327.10**	**25026600.00**	-448.952	529.158	-12735327.10	15010522.00	**NAV**	--
	Mysore /Division*	RRB-SMET Section TRR(P) for a total length of 10.54 km.	**0**	**1053.782**	**0**	**16860512**	**0.000**	**0**	**0.00**	**0.00**	0	1053.782	0.00	16860512.00	**NAV**	--
	Mysore /Division*	TRR(S) of existing 90R for a length of 24.35 km.	**0**	**1977**	**0**	**41517000**	**0.000**	**0**	**0.00**	**0.00**	0	1977.000	0.00	41517000.00	**NAV**	--
	Construction		**0**	**5252**	**0**	**47268000**	**0.000**	**5233**	**0.00**	**47097000.00**	0	19.000	0.00	171000.00	**NAV**	--
NCR	Agra Cantt	CTR 10.60 tkm ETUE-JAB sec.	1102.4	0	33072000	0	1070.830	0	22862220.00	0.00	31.57	0.000	10209780.00	0.00	CTR work was reduced due to change in scope of work as per cite requirement.	
		CTR 17.70 tkm AGC-PWL section	1840.8	0	40574914	0	1410.796	558.912	42323880.00	14531712.00	430.004	-558.912	-1748966.00	-14531712.00	Not found on record	
	Jhansi	NIL	0	0	0	0	0.000	0	0.00	0.00	0	0.000	0.00	0.00	NIL	NIl
	Agra/Construction	MTJ_AH Gauge conversion work	0	2720	0	54400000	0.000	2600	0.00	65000000.00	0	120 -120	0.00	-10600000.00	Initially calculated/projected taking 75 R max. rail instead of 60R rail. variation in value was due to projected rate of Rs.20,000 pmt while sold on average rate of Rs.25000 pmt.	Due to wrong projection of 75R rail instead of 60R rail.
ECR	Sonpur	SPJ-MFP section-CTR(P) from 81.00 to77.00 (4 KM) in down line & 82.46 to 87.26 KM (4.8) in UP side	0	913.264	0	26484000	0.000	726.46	0.00	21067000.00	0	186.804	0.00	5417000.00	Work not completed in 1.8 TKM due to yard location.	
	Sonpur	SPJ-MFP section-CTR(P) from 36.82 to 41.195KM in down line & 85.81 to 86.50 KM in UP side and TRR(P) in UP line 36.82 40.33 KM	0	889.913	0	24116000	0.000	342.474	0.00	9281000.00	0	547.439	0.00	14835000.00	Work not completed in 5.275 TKM & contract was terminated.	
	Samastipur	Gauge conversion work of Saharsa-Dauram Madhepura section (20.120km)	0	985.76	0	9800000	0.000	2056.92	0.00	33524000.00	0	-1071.160	0.00	-23724000.00	not available	
	Samastipur	CTR in SGL-RXL section (Line no. 7,8,&9 in RXL Yard)1.5 km.	0	133.83	0	0	0.000	61.74	0.00	0.00	0	72.090	0.00	0.00	CTR work of only line no.8 (length 685.65 mtr) has been completed. Rest of the work is yet to be completed.	
	Samastipur	CTR(S) in MFP-SGL section 8.841 km.	0	754	0	0	0.000	0	0.00	0.00	0	754.000	0.00	0.00	Rails yet to be changed.	
ER	Howrah [HWH]	GC : BWN-KWAE	0	4515	0	119200132.7	0.000	2325.936	NA	60783685.00	0	2189.064	NA	58416447.66	Due to non execution of full work of sanctioned Estt. The work completed approx .52% of sanctioned Estt.	
	Howrah [HWH]	i) HWH-BDC ML CTR(P) DN ML from 36.06-38.00 & 39.75-41.90=4.09 kms	192.5	192.500	6631625	3570875	398.931	138.938	NA	2307925.00	-206.431	53.562	NA	1262950.00	The balance amount of scrap value includes the SH52kg rail, SH60kg rail released which was used in departmental works and other renewal works on that period.	
	Howrah [HWH]	ii) HWH-BDC-KAN ML CTR(P) on DN ML from Km94.65-95.70, 107.12-108.35 & 108.35-	400	400	13780000	7420000	261.986	259.327	**0.00**	4677558.00	138.014	140.673	13780000.00	2742442.00	Difference in weight due to change in section	
	Sealdah	i) TRR(P) on DN/CCR line between DDI-RCD	0	228.50	0	4113000	677.200	36.1	0.00	552330.00	-677.2	192.400	0.00	3560670.00	Release more sechand material	
	Sealdah	ii) TRR(P) on UP/CCR line between DDI-RCD	0	162.00	0	2916000	563.356	171.17	0.00	2618901.00	-563.356	-9.170	0.00	297099.00	Release more scrap mateials	

Name of the railway	Name of division/ Construction unit	Details of selected CTR/TRR/GC work	Projected in the Estimate				Actual release				Difference in projection and release				Reasons for difference, if any	Remarks
			Rails				Rails				Rails					
			Quantity (in MT)		Value in (Rs.)		Quantity (in MT)		Value in (Rs.)		Quantity (in MT)		Value in (Rs.)			
			Second Hand	Unserviceable	Second Hand	Unserviceable	Second Hand	Unserviceable	Second Hand	Unserviceable	Second Hand('-' denote excess & '+' denote shortage)	Unserviceable('-' denote excess & '+' denote shortage)	Second Hand('-' denote excess & '+' denote shortage)	Unserviceable('-' denote excess & '+' denote shortage)		
1	2	3	4	5	6	7	8.000	9	10.00	11.00	12	13	14	15	16	17
NER	**Lucknow Jn (LJN)**	Gorakhpur_Gonda(TRR)	**519.55**	3130.675	5543143.07	33401558	**519.550**	3130.675	5543143.07	33401558.00	**0**	0.000	0.00	0.00		
	Lucknow Jn (LJN)	Gonda_Mankapur(TRR)	189.24	2977.97	8430776.00	**76796483**	189.240	3024.999	8430776.00	**78009276.00**	0.003	-47.030	0.00	-1212793.00		
	CAO/Con/ GKP	Captanganj_Thawe_Gauage conversion	4553.61	4820.068	170700000	120500000	4553.610	4820.068	170700000.00	120500000.00	0	0.000	0.00	0.00		
	Varanasi	Gorakhpur Cantt_Bhatani_TRR	467.099	1120.735	16442960	32641467	467.099	1120.735	16442960.00	32641467.00	0	0.000	0.00	0.00		
	Varanasi	Salempur_Barhaj_CTR	402.945	1874.88	12213494	56828689	402.945	1373.941	12213494.00	53858435.00	0	500.939	0.00	2970254.00		
ECoR	**Waltair (WAT)**	GC Work Nuapada-Gunupur	0	7000	0	51892500	3426.000	3065	60400000.00	49434031.00	-3426	3935.000	-60400000.00	2458469.00	Estimate prepared considering a uniform section of 75 R rail. Actual rails available/released from track are 30R/40R/50R/60R. Hence reduction in quantity	
	Waltair (WAT)	**(Est.No.WAT/Est/DRF/81/2010)**TRR(P) for a length 4.0 Tr. Km. from km 234.00 to 238.00 betn Jaeypur-Dhanapur stn on KK-II line.	240	240	9174480	3952000	303.000	177	11582781.00	4425000.00	-63	63.000	-2408301.00	-473000.00	Does not arise	
	Waltair (WAT)	TRR(p) 2.195 Km. betn. Ladda-Rayagada on RV line.	57.07	108	2236573	1639665	0.000	311.5	0.00	7416917.00	57.07	-203.500	2236573.00	-5777252.00	1.Renewal was more than the estimated quantity/Km. 2. In estimate scrap was shown only 52 kg rails, while 60 kg rails also released as scrap.	
	Khurda Road (KUR)	CTR(P) for a length of 2 tr.km a between Dhanmandal-Kapilas road of khurda road.	98.8	104	3871972	1494000	0.000	197.18	0.00	5402732.00	98.8	-93.180	3871972.00	-3908732.00	Weight of released Rails consider 5% less than New Rails.	
	Khurda Road (KUR)	CTR(P) 3 tr.km between Jajpur Keonjhar road-Jakhapura of Khurda Road	148.2	156	5807958	2241000	0.000	285.773	0.00	6715666.00	148.2	-129.773	5807958.00	-4474666.00	Weight of released Rails consider 5% less than New Rails.	
NFR	**Katihar**	(1)TRR(P) From Dalkhola-Sudhani (17 km)	1414	353.48	46874100	6185900	781.720	302.85	25914018.00	5299875.00	632.28	50.630	20960082.00	886025.00	Balance quantity done in the jurisdiction of SSE/P-Way/BG/BOE	**The balance quantity as mentioned in Col-16 was executed in CA No. 30/4R/C/1/W-2 dt. 16-3-2009 for the section (a)DLK-SUD (Up) (b)SUD-BOE(Dn)
		(2) TRR Works Gaisal-Kishanganj(74.0-86.0 (Up line)	996.8	251	33390806	4392500	875.280	228.8	29320129.00	4004000.00	121.52	22.200	4070677.00	388500.00	As per site requirement	nil
	Alipurduar Jn	(i) APDJ Divn - 6.4 Km (241.6 - 248.0Km) (TRR)	632.32	0	21181455	0	661.149	20.765	22147169.00	680776.00	-28.829	-20.765	-965714.00	-680776.00	Actual release is more than projected in the estimate is due to released rails of previous extimates.	*As credit value of release SH rail was not mentioned in the estimate therefore, audit has taken the previous estimate of APDJ Divn of similar work executed in the year 2011 for 6.4 Km of TRR works for consideration of rate for SH rail.
		(ii)APDJ Divn - 19.76 Km (Km 122.0-123.0; 166.0-176.6; 177.8-183.0; 186.0-193.0) (TRR)	2091.44	0	70059057	0	1486.6	674.82	49798127.00	15792812.00	604.84	-674.820	20260930.00	-15792812.00	It includes Qty in excess than projection is due to released rails of previous extimates.	nil
	Katihar Division	GC Work :- Aluabari-Siliguri(76 KM)	5000	0	86975000	0	340.239	4659.761	5918457.00	87297830.00	4659.761	-4659.761	81056543.00	-87297830.00	Some rails were used in fencing work of L-Xing, Elect Poll etc.	nil

Name of the railway	Name of division/ Construction unit	Details of selected CTR/TRR/GC work	Projected in the Estimate				Actual release				Difference in projection and release				Reasons for difference, if any	Remarks
			Rails				Rails				Rails					
			Quantity (in MT)		Value in (Rs.)		Quantity (in MT)		Value in (Rs.)		Quantity (in MT)		Value in (Rs.)			
			Second Hand	Unserviceable	Second Hand	Unserviceable	Second Hand	Unserviceable	Second Hand	Unserviceable	Second Hand('-' denote excess & '+' denote shortage)	Unserviceable('-' denote excess & '+' denote shortage)	Second Hand('-' denote excess & '+' denote shortage)	Unserviceable('-' denote excess & '+' denote shortage)		
1	2	3	4	5	6	7	8.000	9	10.00	11.00	12	13	14	15	16	17
SER	Kharagpur (KGP)	CTR(P) for 19.66 km at 213.33-224.69(UP) and 215.90- 222.3, 222.9- 224.8 (DN) between Rupsa and Balasore. (	1166	1166	38609422	18304944	291.030	1465.38	9636792.00	36667282.00	874.97	-299.380	28972630.00	-18362338.00	The work was not done as per estimated work. It was said that rest renewal work was undertaken throgh different Zonal Work , for which accountal of released material was not reflect properly in the released material register maintained in PWI office at Rupsa.	
		CTR(P) of for 6.5 km at km 183.50-190.00 in bet Jalamar- Basta stn. R.T lines	1527.968	1527.968	58409633	23989098	324.700	2203.449	12412307.00	61353797.00	1203.268	-675.481	45997326.00	-37364699.00		
	Chakradharpur (CKP)	CTR(P) from km 243.22-252.60(UP) and 245.22-254.16(DN) between Salgajhari- Adityapur and km 260/4- 260/18=0.6 km Dn. main line in Gamharia yard fpr 16.81 km (excluding TSR from km 245.8- 250.86 Up and 245.1-250.9 Dn for	857.06	857.06	26044340	6922440	729.850	0	22178681.80	0.00	127.21	857.060	3865658.20	6922440.00	Rails were sent to SSE(P.Way)/BDO during PQRS work at tata, Adityapur, BDO jurisdiction fro km 245.22 to km 251.08= 5.88 kms including yard	
		TRR(P) for 16.60 km at km 275.8 to 292.4 (UP) between Sini- Rajkharsawan	961.5	961.5	36755260	15095550	897.685	1002.544	34315804.00	39509337.00	63.815	-41.044	2439456.00	-24413787.00	Heavy axle load & High GMT traffic playing between SNY_RKSN section resulting more wear & tear of rail. Hence second hand quantity is less and unserviceable quantity is more than the estimated quantity.	Released Glued joints 60kg and SEJ 60kg was not taken into account for calculation of released quantity.
CLW/ CRJ	CLW	CTRS (2.7 Km)	0	228	0	3762000	34.332	171.912	566478.00	2836548.00	-34.332	56.088	-566478.00	925452.00		
DLW/ BSB	Scrap Ward	NIL	0	0	0	0	0.000	0	0.00	0.00	0.000	0.000	0.00	0.00		
ICF	ICF	Not Applicable	0	0	0	0	0.000	0	0.00	0.00	0.000	0.000	0.00	0.00		
RWF/ YNK	RWF		0	0	0	0	0.000	0	0.00	0.00	0.000	0.000	0.00	0.00		NOT APPLICABLE
RCF/Kapurthala	RCF	Not Applicable	0	0	0	0	0.000	0	0.00	0.00	0.000	0.000	0.00	0.00		
DMW/PTA	DMW/PTA	Not Applicable	0	0	0	0	0.000	0	0.00	0.00	0.000	0.000	0.00	0.00		
TOTAL (excluding MR)			46999.205	124652.877	1345931180.650	2133623069.760	40135.053	122205.024	1195055185.580	2319930689.830	2156.425	5548.980	140219936.070	-186693460.070		
MR	PWI/ Belgachia	TRR of 60 kg Rail (Primary/Secondary) including some ancilliary works in Up and Dn track from km. 01/12-13 to km. 02/04-05 to Km.02/15-16 between Belgachia and Shyambazar station of M.R. (civil/1968/2011).	3700 M (No categorization of second hand rails or scrap rails was made and also valuation against release materials for each work was not done)				600.98 M	2669.04 M/ 148.48MT	Not assessed	3786240.00	(-) 429M in relation with estimated length under Col. 4,5,6 and 7 (Actual consumption was 3606.90M)				Quantities lying with contractor	Bills passed of 4620 M
	PWI/ Belgachia	TRR of 60 kg Rail (Primary/Secondary) including some ancilliary works in Up and Dn track from km. (-)0/0-01 to 01/04-05 to km. 02/15-16 between Dum Dum and Belgachia Station of M.R. (civil/1967/2011).	3701 M (No categorization of second hand rails or scrap rails was made and also valuation against release materials for each work was not done)				1933.92 M	1954.42 M/ 113.05 MT	Not assessed	2882775.00	(+) 183.33 M in relation with estimated length under Col. 4, 5, 6 and 7 (Actual consumption was 4057.85 M)				Quantities lying with contractor	Bills passed of 4600 M

Annexure IV

Para 5.1.2.5.1

Statement showing stock-verification of released/scrap materials at Stores depot under Dy.CMM/Sales

Name of the railway	Name of the Stores depot	Year	Stock verification for other than Precious metals								Stock verification for Precious metals							
			When due (Date/ Month)	When actually conducted (Date/ Month)	Reasons for delay/ non conduct	Shortage/ Excess, if any, found during stock verification				Reasons	When due (Date/ Month)	When actually conducted (Date/ Month)	Reasons for delay/ non conduct	Shortage/ Excess, if any, found during stock verification				Reasons
						No. of items found excess	Money value of items found excess	No. of items found short	Money value of items found short					No. of items found excess	Money value of items found excess	No. of items found short	Money value of items found short	
1	2	3	4	5	6	7a	7b	8a	8b	9	10	11	12	13a	13b	14a	14b	15
NWR	Bikaner	2010-11	Annual	4-Jun-10	-	0	0.00	0	0.00	-	Annual	4-Jun-10	-	0	0.00	0	0.00	-
		2011-12	Annual	Not done	Non cooperation by the store unit and improper information displayed in MMIS.	0	0.00	0	0.00	-	Annual	Not done	Non cooperation by the store unit and improper information displayed in MMIS.	-	-	-	0.00	-
		2012-13	Annual	Not done	-do-	0	0.00	0	0.00	-	Annual	Not done	-do-	-	-	-	0.00	-
	Jodhpur	2010-11	Annual	22-May-10	-	0	0.00	0	0.00	-	Annual	22-May-10	-	0	0.00	0	0.00	-
		2011-12	Annual	4-Jun-10	-	0	0.00	0	0.00	-	Annual	23-Jul-11	-	0	0.00	0	0.00	-
				13-Jun-11	-	0	0.00	0	0.00	-		2 Nov. 11	-	0	0.00	0	0.00	-
				23-Jul-11	-	0	0.00	0	0.00	-								
				29-Jul-11	-	0	0.00	0	0.00	-								
				29-Nov-11	-	0	0.00	0	0.00	-								
				18-Feb-12	-	0	0.00	0	0.00	-								
				30-Mar-12	-	0	0.00	0	0.00	-								
				31-Mar-12	-	0	0.00	0	0.00	-								
		2012-13	Annual	3-Aug-12	-	0	0.00	0	0.00	-	Annual	23-Jan-13	-	0	0.00	0	0.00	-
				3-Jan-13	-	0	0.00	0	0.00	-		25-Jan-13	-	0	0.00	0	0.00	-
				4-Jan-13	-	0	0.00	0	0.00	-								
				15-Jan-13	-	0	0.00	0	0.00	-								
				16-Jan-13	-	0	0.00	0	0.00	-								
				21-Jan-13	-	0	0.00	0	0.00	-								
				23-Jan-13	-	0	0.00	0	0.00	-								
				25-Jan-13	-	0	0.00	0	0.00	-								
				14-Feb-13	-	0	0.00	0	0.00	-								
	Ajmer	2010-11	Annual	30-Apr-10		0	0.00	0	0.00	-	Annual	1-May-10	-	0	0.00	0	0.00	-
				30-Apr-10		0	0.00	0	0.00	-		1-May-10	-	0	0.00	0	0.00	-
				1-May-10		0	0.00	0	0.00	-		1-Jan-11	-	0	0.00	0	0.00	-
				8-May-10		0	0.00	0	0.00	-			not verified due to non coopration from stores unit					
				20-May-10		0	0.00	0	0.00	-		8 items						
				20-May-10		0	0.00	0	0.00	-								
				21-May-10		0	0.00	0	0.00	-								
				21-May-10		0	0.00	0	0.00	-								
				26-May-10		0	0.00	0	0.00	-								
				26-May-10		0	0.00	0	0.00	-								
				16-Oct-10		0	0.00	0	0.00	-								
				23-Oct-10		0	0.00	0	0.00	-								
				23-Nov-10		0	0.00	0	0.00	-								
				23-Nov-10		0	0.00	0	0.00	-								
				23-Nov-10		0	0.00	0	0.00	-								
				23-Nov-10		0	0.00	0	0.00	-								
				23-Nov-10		0	0.00	0	0.00	-								
				23-Nov-10		0	0.00	0	0.00	-								
				30-Nov-10		0	0.00	0	0.00	-								
				30-Nov-10		0	0.00	0	0.00	-								
				22-Jan-11		0	0.00	0	0.00	-								
				23-Jan-11		0	0.00	0	0.00	-								
				55 items	not verified due to non coopration from stores unit													

Name of the railway	Name of the Stores depot	Year	Stock verification for other than Precious metals								Stock verification for Precious metals							
			When due (Date/ Month)	When actually conducted (Date/ Month)	Reasons for delay/ non conduct	Shortage/ Excess, if any, found during stock verification				Reasons	When due (Date/ Month)	When actually conducted (Date/ Month)	Reasons for delay/ non conduct	Shortage/ Excess, if any, found during stock verification				Reasons
						No. of items found excess	Money value of items found excess	No. of items found short	Money value of items found short					No. of items found excess	Money value of items found excess	No. of items found short	Money value of items found short	
1	2	3	4	5	6	7a	7b	8a	8b	9	10	11	12	13a	13b	14a	14b	15
		2011-12	Annual	1-Apr-11	-	0	0.00	0	0.00	-	Annual	16-Sep-11	-	0	0	0	0	-
				2-Jun-11	-	0	0.00	0	0.00	-		1-Nov-11	-	0	0	0	0	-
				3-Jun-11	-	0	0.00	0	0.00	-		3-Sep-11	-	0	0	0	0	-
				3-Jun-11	-	0	0.00	0	0.00	-								
				4-Jun-11	-	0	0.00	0	0.00	-			not verified due to non coopration from stores unit					
				3-Aug-11	-	0	0.00	0	0.00	-		8 items						
				1-Sep-11	-	0	0.00	0	0.00	-								
				1-Sep-11	-	0	0.00	0	0.00	-								
				1-Sep-11	-	0	0.00	0	0.00	-								
				2-Sep-11	-	0	0.00	0	0.00	-								
				2-Sep-11	-	0	0.00	0	0.00	-								
				2-Sep-11	-	0	0.00	0	0.00	-								
				2-Sep-11	-	0	0.00	0	0.00	-								
				2-Sep-11	-	0	0.00	0	0.00	-								
				3-Sep-11	-	0	0.00	0	0.00	-								
				16-Sep-11	-	0	0.00	0	0.00	-								
				16-Sep-11	-	0	0.00	0	0.00	-								
				16-Sep-11	-	0	0.00	0	0.00	-								
				16-Sep-11	-	0	0.00	0	0.00	-								
				20-Sep-11	-	0	0.00	0	0.00	-								
				8-Oct-11	-	0	0.00	0	0.00	-								
				8-Oct-11	-	0	0.00	0	0.00	-								
				8-Oct-11	-	0	0.00	0	0.00	-								
				8-Oct-11	-	0	0.00	0	0.00	-								
				53 items	not verified due to non coopration from stores unit													
		2012-13	Annual	16-Aug-12	-	0	0.00	0	0.00	-	Annual	29-Aug-12	-	0	0	0	0	-
				18-Aug-12	-	0	0.00	0	0.00	-		28-Dec-12	-	0	0	0	0	-
				18-Aug-12	-	0	0.00	0	0.00	-		28-Dec-12	-	0	0	0	0	-
				29-Aug-12	-	0	0.00	0	0.00	-			not verified due to non coopration from stores unit					
				29-Aug-12	-	0	0.00	0	0.00	-		8 itms						
				29-Aug-12	-	0	0.00	0	0.00	-								
				29-Aug-12	-	0	0.00	0	0.00	-								
				28-Dec-12	-	0	0.00	0	0.00	-								
				28-Dec-12	-	0	0.00	0	0.00	-								
				68 items	not verified due to non coopration from stores unit													
WR	Mahalakshmi	2010-11	2010-11	2010-11	NIL	0	0.00	0	0.00	NAP	2010-11	2010-11	NIL	0	0.00	0	0.00	N/A
	Dahod		2010-11	2010-11	Nil	0	0.00	0	0.00	NAP	2010-11	2010-11	Nil	0	0.00	0	0.00	N/A
	Sabarmati Jn		2010-11	2010-11	Nil	0	0.00	0	0.00	NAP	2010-11	2010-11	nil	0	0.00	0	0.00	N/A
	Pratpnagar		2010-11	2010-11	Nil	0	0.00	0	0.00	NAP	2010-11	2010-11	N/A	0	0.00	0	0.00	NAP
	Mahalakshmi	2011-12	2011-12	2011-12	NIL	0	0.00	0	0.00	NAP	2011-12	2011-12	NIL	0	0.00	0	0.00	NAP
	Dahod		2011-12	2011-12	Nil	0	0.00	0	0.00	NAP	2011-12	2011-12	nil	0	0.00	0	0.00	NAP
	Sabarmati Jn		2011-12	2011-12	Nil	0	0.00	6	243581.00	courtcase	2011-12	2011-12	nil	0	0.00	0	0.00	NAP
	Pratpnagar		2011-12	2011-12	Nil	0	0.00	0	0.00	NAP	2011-12	2011-12	N/A	0	0.00	0	0.00	NAP
	Mahalakshmi	2012-13	2012-13	2012-13	NIL	0	0.00	0	0.00	NAP	2012-13	2012-13	NIL	0	0.00	0	0.00	NAP
	Dahod		2012-13	2012-13	Nil	0	0.00	0	0.00	NAP	2012-13	2012-13	Nil	0	0.00	0	0.00	NAP
	Sabarmati Jn		2012-13	2012-13	Nil	0	0.00	0	0.00	NAP	2012-13	2012-13	nil	0	0.00	0	0.00	NAP
	Pratpnagar		2012-13	2012-13	Nil	0	0.00	0	0.00	NAP	2012-13	2012-13	N/A	0	0.00	0	0.00	NAP

Name of the railway	Name of the Stores depot	Year	Stock verification for other than Precious metals								Stock verification for Precious metals							
			When due (Date/ Month)	When actually conducted (Date/ Month)	Reasons for delay/ non conduct	Shortage/ Excess, if any, found during stock verification				Reasons	When due (Date/ Month)	When actually conducted (Date/ Month)	Reasons for delay/ non conduct	Shortage/ Excess, if any, found during stock verification				Reasons
						No. of items found excess	Money value of items found excess	No. of items found short	Money value of items found short					No. of items found excess	Money value of items found excess	No. of items found short	Money value of items found short	
1	2	3	4	5	6	7a	7b	8a	8b	9	10	11	12	13a	13b	14a	14b	15
WCR	WRS-Kota	2010-11	Not Known	Not conducted	No verification conducted due to mix material received fron deptt & shortage of staff -	0	0.00	0	0.00	-	01.04.2010	27.04.2011	Due to rush of work & shortage of staff -	0	0.00	0	0.00	stock verification has been done as the items is lying with DMS since long (No
		2011-12	Not Known	Not conducted	No verification conducted due to mix material received fron deptt & shortage of staff -	0	0.00	0	0.00	-	01.04.2011	27.03.2012	Due to rush of work & shortage of staff -	0	0.00	0	0.00	stock verification has been done as the items is lying with DMS since long (No receipt/ issue
		2012-13	Not Known	Not conducted	No verification conducted due to mix material received fron deptt & shortage of staff -	0	0.00	0	0.00	-	01.04.2012	10.04.2013	Due to rush of work & shortage of staff -	0	0.00	0	0.00	stock verification has been done as the items is lying with DMS since long (No
	CRWS-Bhopal	2010-11	Not Known	Not conducted	stock verification of big lot is not done, small lot is carried out wherever possible.	0	0.00	0	0.00	Nil	Yearly	Not done	Due to rush of work & shortage of staff -	0	0.00	0	0.00	Witnessed by the verfication staff & kept in Railway premises.
		2011-12	Not Known	Not conducted	stock verification of big lot is not done, small lot is carried out wherever possible.	0	0.00	0	0.00	Nil	Yearly	Not done	Due to rush of work & shortage of staff -	0	0.00	0	0.00	Witnessed by the verfication staff & kept in Railway premises.
		2012-13	Not Known	Not conducted	stock verification of big lot is not done, small lot is carried out wherever possible.	0	0.00	0	0.00	Nil	Yearly	Not done	Due to rush of work & shortage of staff -	0	0.00	0	0.00	Witnessed by the verfication staff & kept in Railway premises.
CR	Parel	2010-11	Verificatio of ferrous items conducted.		-	0	0.00	0	0.00		Feb-11	Feb-11	Nil	0	0.00	0	0.00	-
		2011-12	Verificatio of ferrous items		-	0	0.00	0	0.00		Feb-12	Feb-12	Nil	0	0.00	0	0.00	-
		2012-13	Jan-13	Jan-13	Nil	0	0.00	600 kg	14850.00		Feb-13	Feb-13	Nil	0	0.00	0	0.00	-
	Matunga	2010-11		Stock verification		0	0.00	0	0.00		Stock verification not done			0	0.00	0	0.00	
		2011-12				0	0.00	0	0.00					0	0.00	0	0.00	
		2012-13				0	0.00	0	0.00					0	0.00	0	0.00	
	Manmad	2010-11		Stock verification		0	0.00	0	0.00		Stock verification not done			0	0.00	0	0.00	
		2011-12				0	0.00	0	0.00					0	0.00	0	0.00	
		2012-13				0	0.00	0	0.00					0	0.00	0	0.00	
	Hajibunder	2010-11		Stock verification		0	0.00	0	0.00		Stock verification not done			0	0.00	0	0.00	
		2011-12				0	0.00	0	0.00					0	0.00	0	0.00	
		2012-13				0	0.00	0	0.00					0	0.00	0	0.00	

Name of the railway	Name of the Stores depot	Year	Stock verification for other than Precious metals								Stock verification for Precious metals							
			When due (Date/ Month)	When actually conducted (Date/ Month)	Reasons for delay/ non conduct	Shortage/ Excess, if any, found during stock verification				Reasons	When due (Date/ Month)	When actually conducted (Date/ Month)	Reasons for delay/ non conduct	Shortage/ Excess, if any, found during stock verification				Reasons
						No. of items found excess	Money value of items found excess	No. of items found short	Money value of items found short					No. of items found excess	Money value of items found excess	No. of items found short	Money value of items found short	
1	2	3	4	5	6	7a	7b	8a	8b	9	10	11	12	13a	13b	14a	14b	15
SCR	Lallaguda	2010-11	annually	annually	NA	0	0.00	0	0.00	NA	annually	annually	NA	0	0.00	0	0.00	NA
		2011-12	annually	annually	NA	0	0.00	0	0.00	NA	annually	annually	NA	0	0.00	0	0.00	NA
		2012-13	annually	annually	NA	0	0.00	0	0.00	NA	annually	annually	NA	0	0.00	0	0.00	NA
SECR	GSD/Raipur	2010-11	Nil	Nil	Nil	0	0.00	0	0.00	Nil	Not Recorded			9	5480.00	0	0.00	Excess found other class of materials and mixed melting scrap
			Nil	Nil	Nil	0	0.00	0	0.00	Nil	Not Recorded			0	0.00	1	17.45	Shortage found after delivery of attached lot of
		2011-12	Nil	Nil	Nil	0	0.00	0	0.00	Nil	Nil	Nil	Nil	0	0.00	0	0.00	Nil
		2012-13	Nil	Nil	Nil	0	0.00	0	0.00	Nil	Nil	Nil	Nil	0	0.00	0	0.00	Nil
SR	GSD/Perambur	2010-11	Not Known	04/10-05/10		0	0.00	0	0.00	NIL				0	0.00	0	0.00	
	SSD/PTJ	2010-11	Not Known	07/10		0	0.00	0	0.00	NIL	Not Known	07/10		0	0.00	0	0.00	NIL
	GSD & SSD/GOC	2010-11	Not Known		Shortage of SVs	0	0.00	0	0.00		Not Known			0	0.00	0	0.00	
	GSD/PER	2011-12	Not Known	11/11 & 12/11		0	0.00	0	0.00	NIL	Not Known			0	0.00	0	0.00	
	SSD/PTJ	2011-12	Not Known	08/11		0	0.00	0	0.00	NIL	Not Known	08/11		0	0.00	0	0.00	NIL
	GSD & SSD/GOC	2011-12	Not Known		Shortage of SVs	0	0.00	0	0.00		Not Known			0	0.00	0	0.00	
	GSD/PER	2012-13	Not Known	10/12		0	0.00	0	0.00	NIL	Not Known			0	0.00	0	0.00	
	SSD/PTJ	2012-13	Not Known	07/12		0	0.00	0	0.00	NIL	Not Known	07/12		0	0.00	0	0.00	NIL
	GSD & SSD/GOC	2012-13	Not Known		Shortage of SVs	0	0.00	0	0.00		Not Known			0	0.00	0	0.00	
NR	Shakurbasti	2010-11	24.5.10	24.5.10	No delay	0	0.00	0	0.00	-	NA	NA	NA	0	0.00	0	0.00	
			04.6.10	04.6.10	No delay	0	0.00	0	0.00	-	NA	NA	NA	0	0.00	0	0.00	
			30.6.10	30.6.10	No delay	0	0.00	0	0.00	-	NA	NA	NA	0	0.00	0	0.00	
			30.6.10	30.6.10	No delay	0	0.00	0	0.00	-	NA	NA	NA	0	0.00	0	0.00	
			19.7.10	19.7.10	No delay	0	0.00	0	0.00	-	NA	NA	NA	0	0.00	0	0.00	
			07.8.10	07.8.10	No delay	0	0.00	0	0.00	-	NA	NA	NA	0	0.00	0	0.00	
	Jagadhri Workshop	2010-11	Jun-10	01.06.10	No delay	0		0.100 MT	2050.49	The Quantity 0.100 MT. was not posted by the computer caused shown excess instock sheet	Jan-11	10.01.11	No delay	13	264.08	0	0.00	

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						No. of items found excess	Money value of items found excess	No. of items found short	Money value of items found short					No. of items found excess	Money value of items found excess	No. of items found short	Money value of items found short	
1	2	3	4	5	6	7a	7b	8a	8b	9	10	11	12	13a	13b	14a	14b	15
			Jun-10	01.06.10	No delay	0	0.00	0	0.00		Jan-11	10.01.11	No delay	344	13404.30	0	0.00	
			Sep-10	16.09.10	No delay	13	220531.00	0	0.00	Quantity 6.030 and 7.085 mt were not posted by the computer caused 13.115 mt less shown in stock sheet.	Jan-11	10.01.11	No delay	55	3059.10	0	0.00	
			Dec-10	11.12.10	No delay	0	0.00	0	0.00	-	Jan-11	10.01.11	No delay	1338	108470.84	0	0.00	
			Mar-10	04.03.11	No delay	0	0.00	0	0.00	-	Jan-11	10.01.11	No delay	0	0.00	1542	241516.11	
			Mar-10	07.03.11	No delay	0	0.00	0	0.00	-	Jan-11	07.01.11	No delay	0	0.00	1499	1136035.19	
			Mar-10	26.03.11	No delay	0	0.00	0	0.00	-				0	0.00	0	0.00	
			Mar-10	30.03.11	No delay	0	0.00	0	0.00	-				0	0.00	0	0.00	
	AMV	2010-11	Apr.10	26/04/2010	No delay	81	204387.00	Nil	Nil	-	Apr.10	13/04/10	No delay	5	67.00	Nil	Nil	
	Shakurbasti	2011-12	15.9.11	15.9.11	No delay	0	0.00	0	0.00	-	NA	NA	NA	0	0.00	0	0.00	
			09.1.12	09.1.12	No delay	0	0.00	0	0.00	-	NA	NA	NA	0	0.00	0	0.00	
			10.1.12	10.1.12	No delay	0	0.00	0	0.00	-	NA	NA	NA	0	0.00	0	0.00	
			11.1.12	11.1.12	No delay	0	0.00	0	0.00	-	NA	NA	NA	0	0.00	0	0.00	
			12.1.12	12.1.12	No delay	0	0.00	0	0.00	-	NA	NA	NA	0	0.00	0	0.00	
			13.1.12	13.1.12	No delay	0	0.00	0	0.00	-	NA	NA	NA	0	0.00	0	0.00	
	Jagadhri Workshop	2011-12	Sep-11	05.09.11	No delay	0	0.00	0	0.00	-	Sep-11	22.09.11	No delay	0	0.00	0	0.00	
			Sep-11	07.09.11	No delay	0	0.00	0	0.00	"	Sep-11	23.09.11	No delay	34	901.00	0	0.00	
			Sep-11	14.09.11	No delay	0	0.00	0	0.00	"	Sep-11	24.09.11	No delay	0	0.00	0	0.00	
			Nov-11	22.11.11	No delay	0	0.00	0	0.00	"	Sep-11	29.09.11	No delay	17	1320.00			
			Dec-11	19.12.11	No delay	0	0.00	0	0.00	"	Sep-11	30.09.11	No delay	1699	34761.95	0	0.00	
			Dec-11	22.12.11	No delay	0	0.00	0	0.00	"	Oct-11	04.10.11	No delay	0	0.00	0	0.00	
			Dec-11	29.12.11	No delay	0	0.00	0	0.00	"	Dec-11	29.12.11	No delay	0	0.00	0	0.00	
			Jan-12	03.01.12	No delay	0	0.00	0	0.00	"				0	0.00	0	0.00	
			Jan-12	17.01.12	No delay	0	0.00	0	0.00	"				0	0.00	0	0.00	
			Jan-12	19.01.12	No delay	0	0.00	0	0.00	"				0	0.00	0	0.00	
			Jan-12	24.01.12	No delay	0	0.00	0	0.00	"				0	0.00	0	0.00	
			Feb-12	14.02.12	No delay	0	0.00	0	0.00	"				0	0.00	0	0.00	
			Feb-12	15.02.12	No delay	0	0.00	0	0.00	"				0	0.00	0	0.00	
	AMV	2011-12	Apr,.11	4/4/2011	No delay	29	738632.00	Nil	Nil	"	NA	NA	NA	0	0.00	0	0.00	
	Shakurbasti	2012-13	6/4/2012	6/4/2012	No delay	0	0.00	0	0.00	"	NA	NA	NA	0	0.00	0	0.00	
			2/27/2013	2/27/2013	No delay	0	0.00	1	**2665.00**	"	NA	NA	NA	0	0.00	0	0.00	

Name of the railway	Name of the Stores depot	Year	Stock verification for other than Precious metals								Stock verification for Precious metals							
			When due (Date/ Month)	When actually conducted (Date/ Month)	Reasons for delay/ non conduct	Shortage/ Excess, if any, found during stock verification				Reasons	When due (Date/ Month)	When actually conducted (Date/ Month)	Reasons for delay/ non conduct	Shortage/ Excess, if any, found during stock verification				Reasons
						No. of items found excess	Money value of items found excess	No. of items found short	Money value of items found short					No. of items found excess	Money value of items found excess	No. of items found short	Money value of items found short	
1	2	3	4	5	6	7a	7b	8a	8b	9	10	11	12	13a	13b	14a	14b	15
	Jagadhri Workshop	2012-13	May-12	12.05.12	No delay	6	102181.50	0		wrongly punched,with the result the difference of 6 mt as plus generated by computer	May.12	04.05.12	No delay	0	0.00		0.00	Reply of stock sheet not yet received.
			May-12	28.05.12	No delay	0	0.00	0	0.00		May.12	15.05.12	No delay	0	0.00		0.00	
			Jun-12	02.06.12	No delay	0	0.00	0	0.00	--				0	0.00		0.00	
			Sep-12	10.09.12	No delay	0	0.00	0	0.00	--				0	0.00		0.00	
			Nov-12	05.11.12	No delay	0	0.00	0	0.00	--				0	0.00		0.00	
			Dec-12	03.12.12	No delay	0	0.00	0	0.00	--				0	0.00		0.00	
			Feb-13	08.02.13	No delay	0	0.00	0	0.00	--				0	0.00		0.00	
	AMV	2012-13	Apr.12	3-May-12	Delay due to shortage of staff	19	13263.00	19	160619.00	--	Apr.12	13/7/12	Delay due to shortage of staff	0	0.00	2	3548.00	
SWR	HUBLI DEPOT	2010-11	Yearly	--	Due to shortage of Manpower	0	0.00	0	0.00	--	Yearly	--	Due to shortage of Manpower	0	0.00	0	0.00	--
	HUBLI DEPOT	2011-12	Yearly	--	Due to shortage of Manpower	0	0.00	0	0.00	--	Yearly	--	Due to shortage of Manpower	0	0.00	0	0.00	--
	HUBLI DEPOT	2012-13	Yearly	--	Due to shortage of Manpower	0	0.00	0	0.00	--	Yearly	--	Due to shortage of Manpower	0	0.00	0	0.00	--
	MYSORE DEPOT	2010-11	Yearly	Through out the year	--	0	0.00	0	0.00	--	Yearly	Through out the year	--	0	0.00	0	0.00	--
	MYSORE DEPOT	2011-12	Yearly	Through out the year	--	4	643.00	0		Incorrect accountal	Yearly	Through out the year	--	0	0.00	0	0.00	--
	MYSORE DEPOT	2012-13	Yearly	Through out the year	--	0	0.00	0	0.00	--	Yearly	Through out the year	--	0	0.00	0	0.00	--
NCR	Jhansi Jn. & Kanpur central	2010-11		Stock verification was never done		0	0.00	0	0.00		Stock verification was never done			0	0.00	0	0.00	
		2011-12				0	0.00	0	0.00					0	0.00	0	0.00	
		2012-13				0	0.00	0	0.00					0	0.00	0	0.00	
ECR	Samastipur Jn./Stores Depot	2010-11		No stock verification		0	0.00	0	0.00		A part of non-ferrous items is			0	0.00	0	0.00	
		2011-12				0	0.00	0	0.00					0	0.00	0	0.00	
		2012-13				0	0.00	0	0.00					0	0.00	0	0.00	
ER	Belur [BESY]	2010-11	Nil	Nil	Nil	0	0.00	0	0.00	Nil	Nil	Nil	Nil	0	0.00	0	0.00	Nil
		2011-12	Nil	Nil	Nil	0	0.00	0	0.00	Nil	Nil	Nil	Nil	0	0.00	0	0.00	Nil
		2012-13	Nil	Nil	Nil	0	0.00	0	0.00	Nil	Nil	Nil	Nil	0	0.00	0	0.00	Nil

Name of the railway	Name of the Stores depot	Year	Stock verification for other than Precious metals								Stock verification for Precious metals							
			When due (Date/ Month)	When actually conducted (Date/ Month)	Reasons for delay/ non conduct	Shortage/ Excess, if any, found during stock verification				Reasons	When due (Date/ Month)	When actually conducted (Date/ Month)	Reasons for delay/ non conduct	Shortage/ Excess, if any, found during stock verification				Reasons
						No. of items found excess	Money value of items found excess	No. of items found short	Money value of items found short					No. of items found excess	Money value of items found excess	No. of items found short	Money value of items found short	
1	2	3	4	5	6	7a	7b	8a	8b	9	10	11	12	13a	13b	14a	14b	15
	Jamalpur [JMP]	2010-11	Nil	Nil	Nil	0	0.00	0	0.00	Nil	Nil	Nil	Nil	0	0.00	0	0.00	Nil
		2011-12	Nil	Nil	Nil	0	0.00	0	0.00	Nil	Nil	Nil	Nil	0	0.00	0	0.00	Nil
		2012-13	Nil	Nil	Nil	0	0.00	0	0.00	Nil	Nil	Nil	Nil	0	0.00	0	0.00	Nil
	Halisahar [HLR]	2010-11	Nil	Nil	Nil	0	0.00	0	0.00	Nil	Nil	Nil	Nil	0	0.00	0	0.00	Nil
		2011-12	Nil	Nil	Nil	0	0.00	0	0.00	Nil	Nil	Nil	Nil	0	0.00	0	0.00	Nil
		2012-13	Nil	Nil	Nil	0	0.00	0	0.00	Nil	Nil	Nil	Nil	0	0.00	0	0.00	Nil
NER	Izatnagar - Stores Depot	2010-11	-	03.11.2010	-	0	0.00	0	0.00	-	-	-	-	0	0.00	0	0.00	
		2011-12	-	05.06.2010	-	0	0.00	0	0.00					0	0.00	0	0.00	
		2012-13	-	16.07.2011	-	0	0.00	0	0.00					0	0.00	0	0.00	
		2010-11	-	07.08.2012	-	0	0.00	0	0.00					0	0.00	0	0.00	
		2011-12	-	31.01.2012	-	0	0.00	0	0.00					0	0.00	0	0.00	
		2012-13	-	07.08.2012	-	0	0.00	1	155.00	No information				0	0.00	0	0.00	
		2012-13	-	23.07.2012	-	1	155.00	0	0.00					0	0.00	0	0.00	
		2012-13	-	07.08.2012	-	0	0.00	0	0.00					0	0.00	0	0.00	
		2012-13	-	23.07.2012	-	0	0.00	0	0.00					0	0.00	0	0.00	
		2012-13	-	07.08.2012	-	0	0.00	0	0.00					0	0.00	0	0.00	
		2012-13	-	31.01.2013	-	0	0.00	0	0.00					0	0.00	0	0.00	
	Gorakhpur - Depot	2011-12	12.11.11	12.11.11	NIL	0	0.00	20 Kg	11.00	being weight items. In which actual Qty may(+) or (-) in comparision with book balance.	8.11.11	08.11.11	NIL	13.950 Kgs	946.64	0	0.00	
		2011-12				0	0	0	0.00		09.11.11	09.11.11		0	0.00	0	0.00	
		2011-12				0	0	0	0.00		09.11.11	09.11.11		0	0.00	0	0.00	no verification
		2011-12				0	0	0	0.00		09.11.11	09.11.11		0	0.00	0	0.00	
		2012-13	Aug-13	Aug-13	NIL	0	0	0	0.00		07.12.12	07.12.12		43.200Kg	5720.97	0	0.00	
		2012-13	Aug-13	Aug-13	NIL	0	0	0	0.00					0	0.00	0	0.00	
		2012-13	Aug-13	Aug-13	NIL	0	0	0	0.00					0	0.00	0	0.00	
		2012-13	8/'13	Aug-13	NIL	0	0	0	0.00	-	-	-	-	0	0.00	0	0.00	
		2012-13	Aug-13	Aug-13	NIL	0	0	0	0.00					0	0.00	0	0.00	

Name of the railway	Name of the Stores depot	Year	Stock verification for other than Precious metals								Stock verification for Precious metals							
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						No. of items found excess	Money value of items found excess	No. of items found short	Money value of items found short					No. of items found excess	Money value of items found excess	No. of items found short	Money value of items found short	
1	2	3	4	5	6	7a	7b	8a	8b	9	10	11	12	13a	13b	14a	14b	15
ECoR		2010-11	Scrap yard MCS has been started fuctioning w.e. 2.04.12.Till 31.3.13 there was no due for stock verification.			0	0	0	0.00					0	0.00	0	0.00	
		2011-12				0	0	0	0.00					0	0.00	0	0.00	
		2012-13				0	0	0	0.00					0	0.00	0	0.00	
NFR	Sales Depot New Bongaigaon	2010-11	Mar-11	Not done	Refusal of verification	0	0	0	0.00	Nil	Mar-11	Not done	Refusal of verification	0	0.00	0	0.00	Nil
		2011-12	Mar-12	Not done	Refusal of verification	0	0	0	0.00	Nil	Mar-12	Not done	Refusal of verification	0	0.00	0	0.00	Nil
		2012-13	Mar-13	Not done	Refusal of verification	0	0	0	0.00	Nil	Mar-13	Not done	Refusal of verification	0	0.00	0	0.00	Nil
	Sales Depot Pandu	2010-11	Mar-11	May-10	NA*	0	0	0	0.00	Nil	Mar-11	May-10	NA	0	0.00	0	0.00	Nil
		2011-12	Mar-12	Jun-11	NA	0	0	0	0.00	Nil	Mar-12	Jun-11	NA	0	0.00	0	0.00	Nil
		2012-13	Mar-13	Sep-12	NA	0	0	0	0.00	Nil	Mar-13	Sep-12	NA	0	0.00	0	0.00	Nil
	Sales Depot Dibrugarh Town	2010-11	Mar-11	Feb-11	NA	0	0	0	0.00	Nil	Mar-11	Feb-11	NA	0	0.00	0	0.00	Nil
		2011-12	Mar-12	Feb-12	NA	0	0	0	0.00	Nil	Mar-12	Feb-12	NA	0	0.00	0	0.00	Nil
		2012-13	Mar-13	Mar-13	NA	0	0	0	0.00	Nil	Mar-13	Mar-13	NA	0	0.00	0	0.00	Nil
	Sales Depot NJP	2010-11	Mar-11	Jul-10	NA	0	0	0	0.00	Nil	Mar-11	Jul-10	NA	0	0.00	0	0.00	Nil
		2011-12	Mar-12	Not done	Refusal of verification	0	0	0	0.00	Nil	Mar-12	Not done	Refusal of verification	0	0.00	0	0.00	Nil
		2012-13	Mar-13	Not done	Refusal of verification	0	0	0	0.00	Nil	Mar-13	Not done	Refusal of verification	0	0.00	0	0.00	Nil
SER	Reclamation Yard/Kharagpur	2010-11	Once in two year	14.8.2010 to 31.3.2011	No delay	0	0	0	0.00	Nil	NA	04.3.11 to 25.3.11	Nil	0	0.00	0	0.00	Nil
		2011-12	Once in two year	20.05.11 to 13.03.2012	No delay	0	0	0	0.00	Nil	NA	Not Held	----	0	0.00	0	0.00	Nil
		2012-13	Once in two year	29.4.2012 to 10.11.2012	No delay	9	2697.90	0	0.00	Due to least count	NA	14.06.12 to 03.07.12	Nil	0	0.00	0	0.00	Nil
						15 Kg. Scrap	239.25	0	0.00	"	Nil	Nil	Nil	0	0.00	0	0.00	Nil
						24 Kg. Scrap Buffering	316.37	0	0.00	"	Nil	Nil	Nil	0	0.00	0	0.00	Nil
	Scrap Yard / Kharagpur	2010-11	Once in a year	31.07.10 to 19.02.11	No delay	0	0.00	0	0.00	Nil	Nil	Nil	Nil	0	0.00	0	0.00	Nil
		2011-12	Once in a year	14.06.11 to 31.03.12	No delay	0	0.00	0	0.00	Nil	Nil	Nil	Nil	0	0.00	0	0.00	Nil
		2012-13	Once in a year	23.06.12 to 30.03.13	No delay	0	0.00	0	0.00	Nil	Nil	Nil	Nil	0	0.00	0	0.00	Nil

Name of the railway	Name of the Stores depot	Year	Stock verification for other than Precious metals								Stock verification for Precious metals							
			When due (Date/ Month)	When actually conducted (Date/ Month)	Reasons for delay/ non conduct	Shortage/ Excess, if any, found during stock verification				Reasons	When due (Date/ Month)	When actually conducted (Date/ Month)	Reasons for delay/ non conduct	Shortage/ Excess, if any, found during stock verification				Reasons
						No. of items found excess	Money value of items found excess	No. of items found short	Money value of items found short					No. of items found excess	Money value of items found excess	No. of items found short	Money value of items found short	
1	2	3	4	5	6	7a	7b	8a	8b	9	10	11	12	13a	13b	14a	14b	15
MR	Noapara	2010-11		No stock verification was done during the period of review 2010-11, 2011-12 and 2012-13.		0	0.00	0	0.00			No stock verification was done during the period of review 2010-11, 2011-12 and 2012-13.		0	0.00	0	0.00	
		2011-12				0	0.00	0	0.00					0	0.00	0	0.00	
		2012-13				0	0.00	0	0.00					0	0.00	0	0.00	
CLW/ CRJ		2010-11	May, June, July'10	Not conducted		0	0.00	0	0.00		May, June, July'10	Mar'11, out of 15 items, 5 items	1. Due to non-offering of verification by	1	17264.51	0	0.00	Settled/ finalized.
		2011-12	May, June '11	July'11, out of 54 items, 4 items conducted		0	0.00	0	0.00		May, June'11	Not conducted		0	0.00	0	0.00	
		2012-13	May, June'12	July-Aug'12, out of 54 items 7 items conducted		0	0.00	0	0.00		May, June'12	July'12, out of 15 itmes, 1 item conducted.		0	0.00	0	0.00	
DLW/ BSB	Scrap Ward	2010-11	During 2010-11	During 2010-11	Not applicable	0	0.00	0	0.00	Not applicable	No separate stock verification for precious metals is done in DLW.			0	0.00	0	0.00	
		2011-12	During 2011-12	Oct/Nov. 2011	Not applicable	1	34.00	5	9916.00	Dislocation of material/non-posting of voucher				0	0.00	0	0.00	
		2012-13	During 2012-13	Dec. 2012 Jan 2013	Not applicable	0	0.00	0	0.00	Not applicable				0	0.00	0	0.00	
ICF	Shell Depot	2010-11	April 2010 to March 2011.	April 2010 to March 2011.	No delay	1	92.00	1	1685.00	Due to wrong accountal	No shortage or excess was reported for precious metals. Verification was conducted in April and March of every year.			0	0.00	0	0.00	

Name of the railway	Name of the Stores depot	Year	Stock verification for other than Precious metals								Stock verification for Precious metals							
			When due (Date/ Month)	When actually conducted (Date/ Month)	Reasons for delay/ non conduct	Shortage/ Excess, if any, found during stock verification				Reasons	When due (Date/ Month)	When actually conducted (Date/ Month)	Reasons for delay/ non conduct	Shortage/ Excess, if any, found during stock verification				Reasons
						No. of items found excess	Money value of items found excess	No. of items found short	Money value of items found short					No. of items found excess	Money value of items found excess	No. of items found short	Money value of items found short	
1	2	3	4	5	6	7a	7b	8a	8b	9	10	11	12	13a	13b	14a	14b	15
		2011-12	April 2011 to March 2012.	April 2011 to March 2012.	No delay	0	0.00	0	0.00	Not Applicable				0	0.00	0	0.00	
		2012-13	April 2012 to March 2013.	April 2012 to March 2013.	No delay	0	0.00	4	921.00	Actual shortage accepted				0	0.00	0	0.00	
RWF/ YNK	GSD	2010-11	Yearly	Dec-10	--	1	2339.00	0	0.00	--	Yearly	10-Dec	--	0	0.00	0	0.00	--
	GSD	2011-12	Yearly	11-May		0	0.00	1	9.00	--	Yearly	11-May	--	0	0.00	0	0.00	--
	GSD	2012-13	Yearly	Nil	Staff deputed for scrap sales delivery	0	0.00	0	0.00	--	Yearly	Nil	Staff deputed for scrap sales delivery	0	0.00	0	0.00	--
RCF/ Kapurthala	RCF	2010-11	01.07.10 to 31.07.10	Not conducted	Nil	0	0.00	0	0.00	Items could not be verified due to bulky volume of stock and non-availability of departmental labour	01.07.10 to 31.07.10	01.07.10 to 31.07.10	Nil	0	0.00	0	0.00	No shortage/excess found during stock verification.
		2011-12	01.07.11 to 15.07.11	Not conducted	Nil	0	0.00	0	0.00	_do_	01.07.11 to 15.07.11	01.07.11 to 15.07.11	Nil	0	0.00	0	0.00	
		2012-13	01.06.12 to 15.06.12	Not conducted	Nil	0	0.00	0	0.00	_do_	01.06.12 to 15.06.12	01.06.12 to 15.06.12	Nil	0	0.00	0	0.00	
DMW/PTA	DMW/ PTA	2010-11	As per approved programme	Conducted as per approved programme	No delay	0	0.00	0	0.00	NAP	As per approved programme	Conducted as per approved programme	Delay due to shortage of staff	0	0.00	0	0.00	
		2011-12	_do-	_do_	_do-	4	24459.00	4	316872.00	Excess stock found during stock verification and theft case reported by stores depot for shortage.	_do-	_do_	_do-	0	0.00	0	0.00	
		2012-13	_do-	_do_	_do-	1	190050.00	0	0.00		_do-	_do_	_do-	1	516.00	2	1098.00	Excess/shortage found in stock during stock verification.
					TOTAL		**1500020.02**		**753334.49**						**192176.39**		**1382214.75**	

ANNEXURE - V

(Para 5.3.2.2)

STATEMENT SHOWING THE CAPITAL BLOCK AND THE DIVIDEND PAID DURING THE YEARS 2010-11 TO 2012-13

YEAR	NOMENCLATURE	OPENING BALANCE OF WHEELS	COST PER UNIT (MIN.VALUE)	VALUE OF EXCESS STOCK	CAPITAL BLOCK IN Rs FOR THE YEAR	DIVIDEND RATE FOR THE YEAR	DIVIDEND PAID DURING THE YEAR
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
2010-11	Wheels	17729	31000	549599000	742631000	6%	
	Axles	4596	42000	193032000			44557860
2011-12	Wheels	18105	31000	561255000	773313000	5%	
	Axles	5049	42000	212058000			38665650
2012-13	Wheels	15415	33000	508695000	755277000	4%	
	Axles	5871	42000	246582000			30211080
TOTAL		**66765**			**2271221000**		**113434590**
AVERAGE		**22255**			**757073667**		

*** THE MINIMUM TRANSFER PRICE PER UNIT OF THE WHEEL/AXLE HAS BEEN TAKEN FOR CALCULATION PURPOSES**

SOURCE: Figures under col. 3 & 4 extracted from out-turn statements for year 2010-11 to 2012-13